

**Gas Compressor Industry  
Noise Regulation and  
Control Review Handbook**

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**GAS COMPRESSOR INDUSTRY  
NOISE REGULATION AND CONTROL REVIEW  
HANDBOOK**

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**Prepared for:**

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## 1. INTRODUCTION

In July 1991, Ecology and Environment, Inc. (E & E), was contracted by The Interstate Natural Gas Association of America Foundation, Inc. (INGAA), to review noise legislation and investigate noise-control techniques that apply to the natural gas transmission industry. Data collected were to be summarized and made available to INGAA member firms for use as a handbook to assist them with noise-related decision-making matters.

E & E began the project by contacting agencies responsible for noise-control policy in the lower 48 states and the District of Columbia, as well as representatives from the U.S. Environmental Protection Agency (USEPA), Federal Energy Regulatory Commission (FERC), and the U.S. Department of Housing and Urban Development (HUD). A summary of applicable regulations is provided in Section 2 of this handbook.

The next task was the collection of information concerning noise-source specification and control technology. This information is presented in Section 3.

To obtain a more realistic idea of problems experienced by the gas industry in attaining specific noise levels, as well as to determine what types and techniques of noise control are in use by the industry, E & E prepared a questionnaire, which was distributed by INGAA to its members. The form queried members on these stated concerns; a summary of the responses obtained is presented in Section 4.

Terminology used in discussions of noise regulation and control is defined in Appendix A. A bibliography containing noise-control reference material is presented in Appendix B. State noise regulations are provided in Appendix C.

## **2. NOISE REGULATION REVIEW**

Agencies of the continental 48 states and the District of Columbia that have jurisdiction over noise-related matters were surveyed regarding acceptable noise levels. In addition, USEPA, FERC, and HUD were contacted for information on applicable noise regulations. This section contains a summary of the information obtained from these sources.

### **2.1 STATE REGULATIONS**

All lower 48 states and the District of Columbia were contacted regarding enforceable noise legislation. Enforceable for purposes of this project refers to measurable noise as opposed to nuisance noise, which is not measured. Only nine of the governmental agencies surveyed had enforceable noise regulations in place. The nine were Connecticut, Delaware, Illinois, Maryland, Massachusetts, Minnesota, New Jersey, Oregon, and the District of Columbia.

Most of the regulations were based on land use or zoning designations. All had broad-band sound-level limits. A broad-band sound level is the total of all sound present at a particular time over the entire spectrum (all frequencies) of human hearing.

Three of the states, Illinois, Massachusetts, and Oregon, had pure tone components in their noise-control regulations. Pure tone noise is determined by measuring the ambient sound level and dividing it into its component frequencies, typically octave-band frequencies. The resulting frequency spectrum is reviewed to determine whether one center band

frequency sound level is significantly higher (more than 3 decibels [db]) than its two adjacent center frequencies.

Massachusetts was the only state that had regulations limiting the addition of noise to ambient levels. Delaware was the only state that had a vibration regulation.

Table 2-1 presents a summary of noise level regulations, and Table 2-2 lists state agencies responsible for noise-related issues along with applicable telephone numbers.

## **2.2 LOCAL REGULATIONS**

All agencies contacted indicated that local noise ordinances are not typically tracked by state agencies. E & E, therefore, contacted Dr. Clifford Braydon of the Georgia Institute of Technology, who is considered to be an expert in community noise regulation. He indicated that in 1981 there were approximately 2,000 municipalities (with populations over 10,000) with enforceable noise regulations in place. Currently, more than 6,000 municipalities have enforceable noise legislation. Most regulations are based on zoning classifications, and approximately two-thirds of the regulations address pure tone noise.

Because of the large number and ever-changing nature of local noise ordinances, any prepared summary would probably be inaccurate before it could be published. It is therefore recommended that during any site location process, local noise ordinances also be investigated.

## **2.3 FEDERAL REGULATIONS**

E & E also reviewed noise information from USEPA, HUD, and FERC. USEPA only issues noise guidelines; it does not enforce noise control. HUD has "acceptable" noise standards, which should not typically be affected by compressor station operation. FERC is the only agency that specifically regulates noise emitted from gas compressor stations. Noise regulation summaries as well as telephone numbers for these federal agencies are also presented along with the state information in Tables 2-1 and 2-2.

Table 2-1

## NOISE ORDINANCE SUMMARY

State/ Federal Agency	Enforceable Standards	Regulations Based on Zoning	Noise Characteristics Considered				Noise-Averaging Calculations		
			Broad-Band	Tonal	Max. Peak	Vibration	L <sub>dn</sub>	L <sub>eq</sub>	L <sub>50</sub>
Alabama Arizona Arkansas									
California Colorado Connecticut	X	X	X	X	X				X
Delaware District of Columbia Florida	X X	X X	X X		X	X		X X	
Georgia Idaho Illinois	X	X	X	X	X			X	
Indiana Iowa Kansas									
Kentucky Louisiana Maine									
Maryland Massachusetts Michigan	X X	X X	X X	X			X	X	X
Minnesota Mississippi Missouri	X	X	X						X
Montana Nebraska Nevada									
New Hampshire New Jersey New Mexico	X	X	X		X			X	
New York North Carolina North Dakota									
Ohio Oklahoma Oregon	X	X	X	X	X				X
Pennsylvania Rhode Island South Carolina									
South Dakota Tennessee Texas									
Utah Vermont Virginia									

Table 2-1, Cont.

State/ Federal Agency	Enforceable Standards	Regulations Based on Zoning	Noise Characteristics Considered				Noise-Averaging Calculations		
			Broad-Band	Tonal	Max. Peak	Vibration	L <sub>dn</sub>	L <sub>eq</sub>	L <sub>5</sub>
Washington West Virginia Wisconsin Wyoming									
FERC HUD USEPA	X	X	X				X		

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Table 2-2

## NOISE INFORMATION CONTACTS

State	Department/Agency	Telephone Number
Alabama Arizona Arkansas	Environmental Management Environmental Quality Pollution Control	205/271-7700 602/257-2300 501/562-7444
California Colorado Connecticut	Environmental Protection Natural Resources Environmental Protection	916/445-3846 303/866-3311 203/566-5599
Delaware District of Columbia Florida	Natural Resources and Environmental Conservation Consumer and Regulatory Affairs Environmental Regulation	302/739-4506 202/727-7705 904/488-9334
Georgia Idaho Illinois	Environmental Protection Environmental Quality Environmental Protection	404/656-4713 208/334-5840 217/785-5735
Indiana Iowa Kansas	Environmental Management Environmental Protection Environment	317/232-8162 515/281-4308 913/296-0077
Kentucky Louisiana Maine	Environmental Protection Environmental Quality Environmental Protection	502/564-3350 504/765-0370 207/289-2691
Maryland Massachusetts Michigan	Environmental Protection Environmental Protection Environmental Protection	301/631-3000 617/292-5500 517/373-1220
Minnesota Mississippi Missouri	Pollution Control Environmental Protection Environmental Quality	612/296-6300 601/961-5171 314/751-3443
Montana Nebraska Nevada	Natural Resources and Conservation Environmental Control Environmental Protection	406/444-6873 402/471-2186 702/687-4670
New Hampshire New Jersey New Mexico	Environmental Services Environmental Protection Environment	603/271-3503 609/984-4161 505/827-2850
New York North Carolina North Dakota	Environmental Conservation Environmental Health and Natural Resources Health and Consolidated Laboratories	518/457-5400 919/733-4984 701/221-5188
Ohio Oklahoma Oregon	Environmental Protection Pollution Control Environmental Quality	614/644-3020 405/271-4468 503/229-5696
Pennsylvania Rhode Island South Carolina	Environmental Resources Environmental Management Environmental Health	717/783-1303 401/277-6800 803/734-5360
South Dakota Tennessee Texas	Environmental Regulation Conservation Air Control Board	605/773-3153 615/741-3931 512/451-5711
Utah Vermont Virginia	Environmental Health Environmental Conservation Health	801/538-6121 802/244-8731 804/786-2378

Table 2-2, Cont.

State	Department/Agency	Telephone Number
Washington	Ecology	206/753-6502
West Virginia	Commerce, Labor and Environmental Resources	304/348-2761
Wisconsin	Natural Resources	608/266-2621
Wyoming	Environmental Quality	307/777-7937
--	FERC (Federal Energy Regulatory Commission)	202/208-0600
--	USEPA (U.S. Environmental Protection Agency)	202/382-2080
--	HUD (Housing and Urban Development)	202/708-1422

-- Not applicable.

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### **3. NOISE SOURCE CONTROL**

Noise source control is a major problem faced by the gas compressor industry. This section presents information regarding this topic. The section begins with a summary of noise principles, identifies potential noise sources at gas compressor facilities, provides an overview of equipment manufacturers and noise-control equipment vendors' responses to noise-control problems, identifies some research institutes and universities involved in noise-control research, and concludes with recommendations for research of promising noise-control techniques.

#### **3.1 NOISE PRINCIPLES**

To ascertain what type of noise-control may be most appropriate to address a particular community noise problem, it is necessary to have at least a rudimentary understanding of the principles of sound propagation and attenuation. The following is a brief summary of basic principles:

- o Physically, sonic and vibratory manifestations of sound energy are essentially the same.
- o Sound travels through different media at different speeds. The denser the material, the more rapidly sound will travel through it.
- o As frequency decreases, wavelength increases. Sound having a wavelength much larger than an obstacle is essentially unaffected by the presence of the obstacle. Therefore, a wall is an unacceptable control option when dealing with low-frequency noise but is a superior choice to control high-frequency noise.
- o Sound level is reduced with distance.

Every noise problem has a source from which sound energy radiates (source). The sound travels from the source via a number of potential routes (pathways) and ultimately reaches a person's ear (receiver). In order to control the level of perceived noise, the source, path, or receiver must be modified.

This section deals with community noise source control. A community noise source, for purposes of this report, is one which radiates perceivable sound continuously or cyclically, such as a compressor.

### 3.2 COMMUNITY NOISE SOURCES

There are many potential community noise sources present at gas compressor facilities. Among these are:

- o Heat exchangers,
- o Heater-treaters,
- o Regulators, and
- o Compressors.

The following subsections present descriptions of these noise sources and summaries of accepted noise-control procedures.

### 3.3 HEAT EXCHANGERS

Though not generally considered a major noise source, heat exchangers may at times be implicated as sources of community annoyance. Most noise is generated by the heat exchanger fan, which produces a broad band sound spectrum with a broad low frequency peak. The most effective noise-control treatment is to choose a fan with a good aerodynamic profile. Another effective treatment is minimization of blade loading per unit length, which can be accomplished by increasing the number and length of blades and/or reducing the fan speed.

The motor and/or fan drive transmission may also produce unwanted noise. This can usually be controlled by enclosing the unit(s) in an acoustically lined housing.

In addition to treating noise-producing portions of a heat exchanger, it must also be remembered that any piping attached to the unit or any mechanical connection to structural members will act as a conduit to allow noise to travel away from the unit and manifest itself

elsewhere in the facility. Lagging should be installed on piping and care should be taken to avoid mechanical connections between the pipe wall and structural members.

Mechanical connections between the heat exchanger and structural members, including the ground, should be minimized. Connections should be isolated from the structure itself following vibration isolation procedures using springs, rubber pads, etc.

### **3.4 HEATER-TREATERS**

Heater-treaters are not major noise sources in themselves; however, because of their visibility and typically exposed locations, they are identified in the community as noise sources. Heater-treater noise is generated primarily by combustion and smoke suppression processes. Combustion produces generally low-frequency noise, while smoke suppression processes generate high-frequency noise.

One effective noise-control technique is to locate the heater-treater as far from community sight as possible, or to at least block the public's view of it. Without the visual cue, the relatively moderate noise produced may be imperceptible in the community. Additionally, noise is attenuated with distance, but higher frequencies are attenuated more rapidly by distance than lower frequencies.

If high frequency noise still poses a problem, changes to the smoke suppression system may be required. Low-frequency noise may be more difficult to control and may require further analysis.

### **3.5 REGULATORS**

Regulators are used at several locations within the gas compressor facility boundaries. The pressure-reducing process causes high-frequency noise to be produced. The most cost-effective method of control is to enclose the regulator(s) in an acoustically lined housing. Any inspection panels/doors must be tight fitting to preclude the transmission of noise produced by the regulator.

### **3.6 NATURAL GAS COMPRESSORS**

Compressors are the dominant noise source present at gas compressor facilities. There are two basic types of compressors, reciprocating and

centrifugal, which are generally driven by reciprocating or turbine engines. Several possible modifications/combinations are available, each with its own inherent potential noise problems.

### 3.6.1 Reciprocating Compressor

This positive displacement type of compressor is generally used for smaller volumes and when high compression pressure is required. The unit typically operates at slower speeds than centrifugal units. Many units are integral--the compressor and engine are on the same frame.

The sound spectrum attributable to reciprocating compressor operation is generally in the lower frequencies. The unit's massive casing, however, provides considerable sound transmission loss. Another potential source of noise associated with reciprocating compressors is bearing noise. Sound can also be radiated to the environment through mounting points and attached pipes.

One noise-control technique is enclosure of the unit in an acoustically lined housing. Because of the low-frequency sound produced, it is very important that any enclosure be airtight and that all inspection covers and doors be tight fitting to prevent noise transmission. Bear in mind that additional cooling may be required for the enclosed unit and any penetrations must also be airtight. All cooling air intakes and exhausts must be acoustically treated to avoid the escape of sound to the outside.

Excessive bearing noise may be controlled through proper preventive maintenance procedures. Bearing noise is indicative of worn bearings and when observed usually requires that internal mechanical repairs be made.

In addition to airborne noise, attention must also be directed to structure-borne noise. This can be controlled through the use of vibration isolation techniques. Vibration isolation must also be performed on any piping attached to the compressor. Lagging should be installed on piping and care should be taken to avoid mechanical connections between the pipe wall and structural members.

### 3.6.2 Centrifugal Compressor

This type of compressor is generally employed when large volumes of gas must be compressed and high pressure differentials are not required. It typically operates at relatively higher speeds than reciprocating compressors.

High-speed operation generally produces a high-frequency noise spectrum, only a small portion of which escapes through the unit's massive casing. Because of its high-speed operation, care must be taken to avoid an unbalanced situation, which would cause excessive noise and vibration. Sound is also radiated through unit-mounting points and attached piping.

Noise can be controlled by enclosing the compressor in an air-tight, acoustically lined housing with tight-fitting doors and inspection covers. If additional cooling is required, all penetrations to the enclosure must be treated to prevent the escape of noise.

Another route of sound transmission is through the unit's supporting structure. Control of this noise is possible through use of appropriate vibration isolation techniques using rubber pads, springs, etc., at all mechanical connection points. Vibration isolation should also include attached piping. Lagging should be installed on piping and care should be taken to avoid mechanical connections between the pipe wall and structural members.

### 3.6.3 Reciprocating Engine

Reciprocating engines used in conjunction with reciprocating compressors are usually integral, i.e., both pieces of equipment are mounted on one frame and share a common crankshaft. A reciprocating engine can cause more vibration than turbines if it is improperly designed and/or installed. This type of engine generally operates at lower speeds than turbines.

The relatively low-speed operation of this engine produces a generally low-frequency noise spectrum. Other prominent noise sources include intakes, exhaust, and crankcase ventilators. Worn bearings may also produce discernible noise; however, when bearing noise is observed, internal mechanical repairs are typically necessary.

The engine is available in either naturally aspirated or turbocharged versions. Naturally aspirated engines use air at atmospheric pressure to provide the oxygen necessary for combustion. The inlet may be a source of high-frequency noise.

Turbocharged engines supply air under pressure to the engine, displacing exhaust gases in the cylinder headspace. This provides a relatively oxygen-rich air-fuel mixture, which increases engine horsepower. The aspiration type produces high-frequency intake noise; high-frequency noise is also associated with the turbocharger unit.

Engine exhaust is typified by low-frequency noise. Crankcase ventilators are also a low-frequency noise source, whose frequency distribution may change with engine wear.

Airborne noise generated by the engine can generally be controlled by locating the unit in an acoustically lined, airtight enclosure. All doors and inspection covers must be tight fitting. All penetrations to the enclosure must be acoustically treated to prevent the escape of noise. Turbine noise may be controlled by enclosing the unit in an acoustically lined housing, taking all precautions stated previously to prevent the escape of noise.

Noise emanating from intakes, exhausts, and vents is typically controlled by passive silencers (i.e., mufflers). This noise may further be controlled by elevating the inlet/outlet of the device in relation to the affected community.

Structure-borne noise is also a concern with the reciprocating engine. Mechanical connections to the structure should be minimized. Appropriate vibration isolation techniques should be employed at all connecting points including those to attached piping. Lagging should be installed on all attached piping, and mechanical connections between the pipe wall and structural members must be avoided.

#### **3.6.4 Turbine Engine**

Turbine engines are generally used to drive centrifugal compressors, and are not normally used with reciprocating compressors. Two types are utilized by the gas compressor industry; industrial turbines and aircraft-derivative turbines. The industrial turbine operates in the range of 6,000 to 8,000 rpm and may be used in a direct-drive

configuration with the compressor unit. The aircraft-derivative turbine operates in the range of 8,000 to 30,000 rpm and usually requires a speed-reducer between the turbine and compressor.

Turbines produce a high-frequency noise spectrum because of their high-speed operation. Other sources of noise are intakes, exhausts, and speed-reducers.

Intakes and exhausts generally produce a noise spectrum tending toward the higher frequencies. Speed-reducers may be a source of gear noise.

Turbine noise may be controlled by enclosing the unit in an acoustically lined, airtight housing. Inspection covers and doors must be tight fitting to avoid the escape of produced noise. Any penetrations to the enclosure must be acoustically treated to prevent the transmission of noise through the penetrations.

Airborne noise emitted by the intakes and exhausts is usually controlled by passive silencers, sometimes in conjunction with increasing the elevation of the inlet/outlet of the offending component. Noise produced by the speed-reducer may be controlled by enclosing it in an acoustically lined housing.

Noise is also transmitted to the structure through mechanical attachment of the unit to the structure. All attachment points should undergo vibration isolation treatment, through the use of springs, rubber pads, etc. Similar treatment should be employed for all piping attached to the turbine. Lagging should be installed on all attached pipes; mechanical connections between the pipe wall and structural members must be avoided.

#### **3.6.5 Compressor Building**

Sound produced by compressors and drive engines within a building can be magnified by building acoustics and by the physical placement of the equipment.

To prevent the establishment of a reverberant field in the building, walls and ceilings should be acoustically lined. This will reduce the perceived noise inside the structure as well as control the amount of noise leaving the building. As is the case with acoustic

equipment enclosures, doors, windows, and penetrations should be adequately sealed to prevent the escape of interior noise.

Buildings should be situated or acoustically treated to prevent them from acting like a "megaphone," i.e., directing radiated noise toward the adjacent community.

### **3.7 EQUIPMENT MANUFACTURERS**

A number of manufacturers of turbine- and reciprocating engine-driven compressors were contacted regarding the availability of noise specifications for their equipment. Most manufacturers indicated that their equipment was usually built to order, and that accurate noise data, if required, were generally collected during unit testing. Each manufacturer also had several models available in different configurations and including different component parts. It was therefore difficult for manufacturers to provide accurate noise specifications for a particular model.

Because of these various factors, it is suggested that orders for gas compressor equipment stipulate that noise level as well as octave-band information be provided by the manufacturer.

### **3.8 NOISE-CONTROL EQUIPMENT VENDORS**

Vendors of noise-control equipment were contacted for information on their products that are typically used by the gas compressor industry. A list of companies contacted is presented in Table 3-1.

Most vendors indicated that they work very closely with equipment manufacturers to provide noise attenuation products to meet required specifications. They also indicated that they work closely with designers and facility owners to provide custom-made noise-control products/systems to alleviate specific problems.

### **3.9 RESEARCH INSTITUTES AND UNIVERSITIES**

Many research institutes and universities have programs relating to noise control. E & E contacted several of these organizations and inquired about the availability of noise-control documents and/or the status of current noise-control studies. A list of groups contacted appears in Table 3-2.



Publications dealing with noise control are available from the American Gas Association and the Electric Power Research Institute (refer to Table 3-3). Auburn University's Noise Control Center publishes the Noise Control Engineering Journal and the Center will research specific noise-related topics. The American Petroleum Institute, Gas Research Institute, and Pennsylvania State University each indicated that they had no current information on gas compressor noise control available; however, they would research specific noise-related topics, if requested.

### 3.10 RESEARCH RECOMMENDATIONS

#### 3.10.1 Active Noise Control

One noise-control technique of potentially great significance to the natural gas industry is active noise control. Basically, the system is composed of a sound receiver (microphone), signal decoder, and sound transmitter (speaker). The receiver monitors the acoustic characteristics of the noise source. This monitoring information is sent to the signal decoder, where the sound is broken into its component parts. Sound, which is typically out of phase in relation to the noise source, is then sent to the sound transmitter and broadcast at the source's sound wave. The resultant meeting of the two waves cancels the noise, creating a "quiet" piece of equipment.

This type of noise control is most effective for low-frequency sound. It works, in effect, by cutting the peaks off pure tone noise spectrum constituents. A pure tone noise is generally considered more annoying than broad-band noise. Therefore, removal of these peaks, creates a more evenly distributed, less annoying broad-band noise.

Passive silencers currently in use for controlling noise emissions from compressor drive engine exhaust stacks are most efficient for the control of higher frequency sound. The use of active noise control as an enhancement to control low-frequency noise control offers strong possibilities for further research. Digisonix of Middleton, Wisconsin, is an industry leader in research and development of active noise-control systems.

### 3.10.2 Active Vibration Isolation

This is a relatively new technology that operates using the same physical properties as active noise control, i.e., a wave is detected and an out-of-phase wave is transmitted to cancel it. Instead of a sound wave, however, the canceling signal drives actuators that cancel the detected vibration.

Active vibration isolation is most effective for low-frequency vibration, which makes up the greatest proportion of energy transmitted to structural members. At the present time, research is being conducted by a partnership of Active Noise and Vibration Technologies, Inc., of Phoenix, Arizona, and Moog, Inc., of East Aurora, New York. Efforts have been aimed at developing an active vibration isolation system for automobile engines.

This emerging technology has great potential for gas compressor industry research and ultimate usage as a noise-control option.

Table 3-1

NOISE-CONTROL EQUIPMENT VENDORS

Company	Telephone Number
Active Noise and Vibration Technologies	214/739-2688
American Air Filter	502/637-0011
Central Metal Fabricators	305/261-6262
Digisonix	608/836-3999
Flaregas Corporation	914/352-8877
Industrial Noise Control, Inc.	708/620-1998
Illbruck	800/662-0032
Kinetics Noise Control	614/889-0480
The Proudfoot Company	203/459-0031
VANEC	214/243-1951

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**Table 3-2**

**NOISE-CONTROL RESOURCES**

Organization	Telephone Number
American Gas Association	703/841-8416
American Petroleum Institute	202/682-8000
Auburn University	205/844-4000
Electric Power Research Institute	415/855-2000
Gas Research Institute	312/399-8100
Pennsylvania State University	814/865-6364

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Table 3-3

RESEARCH INSTITUTE AND UNIVERSITY  
NOISE-CONTROL PUBLICATIONS

American Gas Association

Handbook of Noise Control at Gas Pipeline Facilities, Catalog Number L00377, 1977.

Noise Research and Noise Projection Models Applicable to Natural Gas Pipelines (Catalog number L51542), 1987.

Auburn University

Noise Control Engineering Journal, Institute of Noise Control Engineering, P.O. Box 3206, Arlington Branch, Poughkeepsie, NY 12601

Electric Power Research Institute

Noise Control at Fossil Fuel Power Plants: Industry Wide Assessment of Costs and Benefits, Document number CS-3262, 1983.

Preliminary Design Study of Compressed Air Energy Storage in a Salt Dome, Volume 4, CAES Turbo Machinery Design, Document Number EM-2210, 1982.

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#### **4. INGAA NOISE LEGISLATION REVIEW QUESTIONNAIRE**

An important facet of this project was solicitation of INGAA member responses to experiences with noise regulations and types of noise-control techniques that they use. To accomplish this task, E & E prepared a questionnaire that was forwarded to members through INGAA. The questionnaire is presented in Figure 4-1.

A total of 16 firms responded to the survey. Their responses are summarized in this section.

##### **4.1 LOCATIONS**

Facilities were located in 41 of the continental 48 states. No gas compressor stations were located in California, Delaware, Florida, Maine, New Hampshire, Nevada, Vermont, or the District of Columbia.

##### **4.2 FERC NOISE REQUIREMENTS**

Eleven companies indicated that they had no difficulty meeting FERC noise requirements. Three responded that they had or may have problems retrofitting existing equipment into FERC compliance. Two members indicated that prior to obtaining FERC approval, it was necessary to employ additional noise-control equipment.

One respondent indicated that his firm usually does not have trouble meeting FERC noise requirements for compression equipment, but that he sometimes experiences noise emission problems with other facility equipment.

#### **4.3 STATE NOISE REQUIREMENTS**

All firms except two indicated that they had not experienced any problems in meeting state noise requirements. One indicated that in order to achieve compliance, it was necessary to provide additional noise-control measures; the other said that noise became an issue when residences were built close to an existing station.

#### **4.4 LOCAL NOISE REQUIREMENTS**

Two members answered that they had experienced problems meeting local noise ordinance requirements. Both said that the levels exceeded were based on nuisance noise standards.

#### **4.5 NATURAL GAS COMPRESSOR MANUFACTURERS**

A total of 21 different manufacturers supply the gas compressor equipment used at facilities operated by the 16 respondents. A list of manufacturers is presented in Table 4-1. Some of these manufacturers were contacted for additional information, which is presented in Section 3 of this report.

#### **4.6 COMPRESSOR NOISE CONTROL**

All respondents used inlet and exhaust silencers on their compressor equipment. Acoustical performance rating of silencers ranged from standard to hospital grade.

A number of other noise-control devices were mentioned. These are listed in Table 4-2. Manufacturers and vendors of these items were contacted in compiling information appearing in Section 3.

#### **4.7 OTHER NOISE SOURCES**

In addition to compressor noise, other types of equipment in use at company facilities were identified as potential noise sources. A list of these is presented in Table 4-3. Noise-control techniques for these sources are discussed in Section 3.

#### 4.8 PERIODIC NOISE ASSESSMENTS

Eleven companies indicated that they do not perform periodic noise assessments. The remaining five answered that they do perform some type of periodic noise measurement.

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Table 4-1  
ENGINE AND TURBINE MANUFACTURERS

Company
Ajax
Allison
Ariel
Caterpillar
Chicago-Pneumatic
Clark
Clark/Garret
Cooper-Bessemer
Delaval
Enterprise-Delaval
General Electric
Ingersoll-Rand
Norberg
Pratt-Whitney
Rolls-Royce
Solar
Superior
Waukesha
Westinghouse
White Superior
Worthington

Compiled by Ecology  
and Environment, Inc.,  
1992. 7761:1

Table 4-2

**COMPRESSOR NOISE-CONTROL  
EQUIPMENT/TECHNIQUES**

Equipment/Technique
Inlet and exhaust silencers
Starter gas "muffler"
Acoustic insulation
Sound barriers (walls)
Use of low-speed fans
Architectural design
Building/equipment orientation
Landscaping
Discharge pipe dampening/ insulation

Compiled by Ecology and  
Environment, Inc. 1992.

7761:1

Table 4-3

OTHER NOISE SOURCES

Noise Source
Air intakes
Building construction
Coolers
Engine blowdown
Fin fan Coolers
Heaters
Hydraulic oil piping
Piping noise
Regulators
Relief valves
Surge valves
Turbochargers
Vaporizers

Compiled by Ecology and  
Environment, Inc., 1992.

7761:1

INGAA NOISE LEGISLATION REVIEW QUESTIONNAIRE

COMPANY:

ADDRESS:

CONTACT:

TELEPHONE:

1. Indicate states in which gas compressor facilities are located.

AL	IN	MT	PA
AZ	IA	NE	RI
AR	KS	NV	SC
CA	KY	NH	SD
CO	LA	NV	TN
CT	ME	NM	TX
DE	MD	NY	UT
DC	MA	NC	VT
FL	MI	ND	VA
GA	MN	OH	WA
ID	MS	OK	WV
IL	MO	OR	WI
			WY

2. Has the company ever experienced difficulty meeting FERC noise requirements? Please describe briefly.

3. Has the company ever experienced difficulty meeting state noise requirements? Please indicate which state(s) and provide a brief description of the problem.

Figure 4-1

INGAA QUESTIONNAIRE

**INGAA NOISE LEGISLATION REVIEW QUESTIONNAIRE**

4. Has the company ever experienced difficulty meeting local noise requirements? Please indicate which locality and provide a brief description of the problem.
  
  
  
  
  
  
  
  
  
  
5. What manufacturer/type/model of natural gas compressor units are used at company facilities?
  
  
  
  
  
  
  
  
  
  
6. What type(s) of compressor noise control equipment is utilized at company facilities?
  
  
  
  
  
  
  
  
  
  
7. Besides compressors, are there any other noise sources which typically require control? Please list and indicate control technique.

**Figure 4-1 (Cont.)**

**INGAA NOISE LEGISLATION REVIEW QUESTIONNAIRE**

8. Does the company perform periodic noise assessments to assure compliance with mandated noise levels?

9. Comments:

**Figure 4-1 (Cont.)**

APPENDIX A

GLOSSARY OF TERMS





## GLOSSARY OF TERMS

**Ambient Noise** - The all-encompassing noise associated with a given environment. Ambient noise is usually composed of sounds from many sources.

**Audible Range (of Frequency) (Audio-Frequency Range)** - The frequency range 16 Hz to 20,000 Hz (20kHz). This is conventionally taken to be the normal frequency of human hearing.

**A-Weighted Sound Level** - A quantity, in dB, read from a standard sound-level meter with A-weighting circuitry. The A-scale weighting discriminates against the lower frequencies according to a relationship approximating the auditory sensitivity of the human ear. The A-scale sound level measures approximately the relative "noisiness" or "annoyance" of many common sounds.

**Broad-Band Noise** - Noise whose energy is distributed over a broad range of frequency (generally more than one octave).

**Continuous Noise** - On-going noise whose intensity remains at a measurable level (which may vary) without interruption over an indefinite or a specified period of time.

**Day-Night Average Sound Level ( $L_{dn}$ )** - The 24-hour A-weighted sound level, with a 10-dB weighting applied to the nighttime levels (from 2200 to 0700 hours). The concept is based on the premise that individuals

are more annoyed by a given level of noise during nominal sleep hours than in the daytime.

**Decibel (dB)** - The decibel is a dimensionless, logarithmic unit of measure of sound pressure.

**Directivity (of sound sources)** - Relating to the phenomenon that, in practice, most sound sources do not radiate sound with equal intensity in all directions.

**Equivalent Sound Level ( $L_{eq}$ )** - The level of the mean square A-weighted sound pressure over a given time interval. The time interval over which the measurement is taken should always be specified.

**Far-Field Sound Field** - Area of wave propagation where sound waves are traveling radially outward from the acoustic center. Measured sound-pressure levels will decrease 6 dB for each doubling of distance. Sound-pressure measurements should be performed under far-field conditions.

**Frequency** - Number of complete oscillation cycles per unit of time. The unit of frequency often used is the Hertz (Hz).

**Frequency Band** - Difference in Hertz between the upper and lower frequencies that delimit a band, or the interval in octaves between the two frequencies. The band is located by the geometric mean frequency between the two band-edge frequencies. An example is an octave band centered at 500 Hz, or, more simply, a 500-Hz octave band.

**Hertz** - Unit of frequency equal to 1 cycle per second.

**Impulse Noise (Impulsive Noise)** - Noise of short duration (typically less than 1 second), especially of high intensity, abrupt onset, and rapid decay, and often rapidly changing spectral composition. Impulse noise is characteristically associated with such sources as explosions, impacts, and many industrial processes.

**Near-Field Sound Field** - Area of wave propagation existing near a sound source where sound waves form a turbulent acoustic field with the wave amplitude varying in an almost random fashion.

**Pure Tone Noise** - Noise whose energy is concentrated in a single frequency band.

**Sound-Level Meter** - An instrument that provides a direct reading of the sound-pressure level at a particular location. A sound-level meter consists of a microphone and electronic amplifier together with a meter having a scale graded in dB. Standard sound-level meters must satisfy the requirements of American National Standards Institute (ANSI) Specification for Sound Level Meters, S1.4-1971.

**Sound Pressure** - The sound pressure at a point in a sound field is a measure of the fluctuating variations in pressure from the static value (i.e., atmospheric pressure) caused by the presence of the sound field. For most complex sound sources, the sound pressure contains energy over a broad frequency range audible to humans.

**Sound-Pressure Level (SPL)** - The range in sound pressures is greater than a factor of one million, from the minimum audible sound waves to those present in the vicinity of a modern jet airplane. A measure of the sound pressures is therefore more convenient on a reduced scale. A logarithmic scale is used in which equal increments correspond to equal multiples of sound pressure; the reference pressure corresponds approximately to the minimum audible sound pressure. This is a convenient scale to use since the ear responds to sound waves in a similar manner. On such a scale, the measurement of sound pressure is termed SPL, the units being the dB.

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## APPENDIX B

### BIBLIOGRAPHY



## BIBLIOGRAPHY

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APPENDIX C

STATE NOISE REGULATIONS



## CONNECTICUT NOISE REGULATIONS



REGULATIONS OF  
CONNECTICUT STATE AGENCIES



TITLE 22a

ENVIRONMENTAL PROTECTION

SECTION 22a-69-1 TO 22a-69-7.4

CONTROL OF NOISE



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## Control of Noise

### Sec. 22a-69-1. Definitions

#### Sec. 22a-69-1.1. General

(a) **adaptive reuse** means remodeling and conversion of an obsolete or unused building or other structure for alternate uses. For example, older industrial buildings, warehouses, offices, hotels, garages, etc., could be improved and converted for reuse in terms of industrial processes, commercial activities, educational purposes, residential use as apartments, or other purposes.

(b) **aircraft** means any engine-powered device that is used or intended to be used for flight in the air and capable of carrying humans. Aircraft shall include civil, military, general aviation and VTOL/STOL aircraft.

(i) **aircraft, STOL** means any aircraft designed for, and capable of, short take-off and landing operations.

(ii) **aircraft, VTOL** means any aircraft designed for, and capable of, vertical take-off and landing operations such as, but not limited to, helicopters.

(c) **airport** means an area of land or water that is used, or intended to be used, for the landing and takeoff of aircraft and is licensed by the State of Connecticut Bureau of Aeronautics for such use. "Airport" shall include all buildings and facilities if any. "Airport" shall include any facility used, or intended for use, as a landing and take-off area for VTOL/STOL aircraft, including, but not limited to, heliports.

(d) **ANSI** means the American National Standards Institute or its successor body.

(e) **best practical noise control measures** means noise control devices, technology and procedures which are determined by the Commissioner to be the best practical, taking into consideration the age of the equipment and facilities involved, the process employed, capital expenditures, maintenance cost, technical feasibility, and the engineering aspects of the applicable noise control techniques in relation to the control achieved and the non-noise control environmental impact.

(f) **commissioner** means the Commissioner of the Department of Environmental Protection or his/her designated representative.

(g) **construction** means any, and all, physical activity at a site necessary or incidental to the erection, placement, demolition, assembling, altering, blasting, cleaning, repairing, installing, or equipping of buildings or other structures, public or private highways, roads, premises, parks, utility lines, or other property, and shall include, but not be limited to, land clearing, grading, excavating, filling and paving.

(h) **daytime** means 7:00 a.m. to 10:00 p.m. local time.

(i) **director** means the Director of the Office of Noise Control in the Department of Environmental Protection.



(j) **emergency** means any occurrence involving actual or imminent danger to persons or damage to property which demands immediate action.

(k) **intrusion alarm** means a device with an audible signal which, when activated, indicates intrusion by an unauthorized person. Such alarm may be attached to, or within, any building, structure, property or vehicle.

(l) **ISO** means the International Organization for Standardization, or its successor body.

(m) **lawn care and maintenance equipment** means all engine or motor-powered garden or maintenance tools intended for repetitive use in residential areas, typically capable of being used by a homeowner, and including, but not limited to, lawn mowers, riding tractors, snow-blowers, and including equipment intended for infrequent service work in inhabited areas, typically requiring skilled operators, including, but not limited to, chain saws, log chippers or paving rollers.

(n) **nighttime** means 10:00 p.m. to 7:00 a.m. local time.

(o) **noise zone** means an individual unit of land or a group of contiguous parcels under the same ownership as indicated by public land records and, as relates to noise emitters, includes contiguous publicly dedicated street and highway rights-of-way, railroad rights-of-way and waters of the State.

(p) **office of noise control** means the office within the Department of Environmental Protection designated by the Commissioner to develop, administer and enforce the provisions of Chapter 442 of the Connecticut General Statutes.

(q) **OSHA** means the Occupational Safety and Health Act and any amendments thereto or successor regulations administered by the U.S. and Connecticut Departments of Labor, or successor bodies.

(r) **person** means any individual, firm, partnership, association, syndicate, company, trust, corporation, municipality, agency, or political or administrative subdivision of the State or other legal entity of any kind.

(s) **public emergency sound signal** means an audible electronic or mechanical siren or signal device attached to an authorized emergency vehicle or within or attached to a building for the purpose of sounding an alarm relating to fire or civil preparedness. Such signal may also be attached to a pole or other structure.

(t) **SAE** means the Society of Automotive Engineers, Inc., or its successor body.

(u) **safety and protective devices** means devices that are designed to be used, and are actually used, for the prevention of the exposure of any person or property to imminent danger, including, but not limited to, unregulated safety relief valves, circuit breakers, protective

fuses, back-up alarms required by OSHA or other state or federal safety regulations, horns, whistles or other warning devices associated with pressure buildup.

(v) **site** means the area bounded by the property line on or in which a source of noise exists.

(Effective June 15, 1978)

## **Sec. 22a-69-1.2. Acoustic terminology and definitions**

(a) All acoustical terminology used in these Regulations shall be in conformance with the American National Standards Institute (ANSI), "Acoustical Terminology," contained in publication S1.1 as now exists and as may be hereafter modified. The definitions below shall apply if the particular term is not defined in the aforesaid ANSI publication.

(b) **audible range of frequency** means the frequency range 20 Hz to 20,000 Hz which is generally considered to be the normal range of human hearing.

(c) **background noise** means noise which exists at a point as a result of the combination of many distant sources, individually indistinguishable. In statistical terms, it is the level which is exceeded 90% of the time ( $L_{90}$ ) in which the measurement is taken.

(d) **continuous noise** means ongoing noise, the intensity of which remains at a measurable level (which may vary) without interruption over an indefinite period or a specified period of time.

(e) **decibel (dB)** means a unit of measurement of the sound level.

(f) **excessive noise** means emitter Noise Zone levels from stationary noise sources exceeding the Standards set forth in Section 3 of these Regulations beyond the boundary of adjacent Noise Zones.

(g) **existing noise source** means any noise source(s) within a given Noise Zone, the construction of which commenced prior to the effective date of these Regulations.

(h) **fluctuating noise** means a continuous noise whose level varies with time by more than 5 dB.

(i) **frequency** means the number of vibrations or alterations of sound pressure per second and is expressed in Hertz.

(j) **hertz (Hz)** means a unit of measurement of frequency formerly stated as, and numerically equal to, cycles per second.

(k) **impulse noise** means noise of short duration (generally less than one second), especially of high intensity, abrupt onset and rapid decay, and often rapidly changing spectral composition.

(l) **infrasonic sound** means sound pressure variations having frequencies below the audible range for humans, generally below 20 Hz; subaudible.

(m)  $L_{10}$  means the A-weighted sound level exceeded 10% of the time period during which measurement was made.

(n)  $L_{50}$  means the A-weighted sound level exceeded 50% of the time period during which measurement was made.

(o)  $L_{90}$  means the A-weighted sound level exceeded 90% of the time period during which measurement was made.

(p) octave band sound pressure level means the sound pressure level for the sound contained within the specified preferred octave band, stated in dB, as described in ANSI S1.6-1967: Preferred Frequencies and Band Numbers for Acoustical Measurements.

(q) peak sound pressure level means the absolute maximum value of the instantaneous sound pressure level occurring in a specified period of time.

(r) prominent discrete tone means the presence of acoustic energy concentrated in a narrow frequency range, including, but not limited to, an audible tone, which produces a one-third octave sound pressure level greater than that of either adjacent one-third octave and which exceeds the arithmetic average of the two adjacent one-third octave band levels by an amount greater than shown below opposite the center of frequency for the one-third octave band containing the concentration of acoustical energy.

<i>1/3 Octave Band Center Frequency (Hz)</i>	<i>dB</i>
100	16
125	14
160	12
200	11
250	9
315	8
400	7
500	6
630	6
800	5
1000	4
1250	4
1600	4
2000	3
2500	3
3150	3
4000	3
5000	4
6300	4
8000	5
10000	6

(s) reference pressure is 0.00002 Newtons per square meter ( $N/M^2$ ), or 20 microPascals, for the purposes of these Regulations.

(t) sound means a transmission of energy through solid, liquid, or gaseous media in the form of vibrations which constitute alterations in pressure or position of

the particles in the medium and which, in air, evoke physiological sensations, including, but not limited to, an auditory response when impinging on the ear.

(u) **sound analyzer** means a device, generally used in conjunction with a sound level meter, for measuring the sound pressure level of a noise as a function of frequency in octave bands, one-third octave bands or other standard ranges. The sound analyzer shall conform to Type E, Class II, as specified in ANSI S1.11-1971 or latest revision.

(v) **sound level** means a frequency weighted sound pressure level, obtained by the use of metering characteristics and the weighting A, B, or C as specified in ANSI, "Specifications for Sound Level Meters," S1.4-1971 or latest revision. The unit of measurement is the decibel. The weighting employed must always be stated as dBA, dBB, or dBC.

(w) **sound level meter** means an instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement of sound levels. The sound level meter shall conform to ANSI Specifications for Sound Level Meters S1.4-1971.

(x) **sound pressure level (SPL)** means twenty times the logarithm to the base ten of the ratio of the sound pressure in question to the standard reference pressure of 0.00002 N/M<sup>2</sup>. It is expressed in decible units.

(y) **ultrasonic sound** means sound pressure variations having frequencies above the audible sound spectrum for humans, generally higher than 20,000 Hz; superaudible.

(z) **vibration** means an ascillatory motion of solid bodies of deterministic or random nature described by displacement, velocity, or acceleration with respect to a given reference point.

(Effective June 15, 1978)

### **Sec. 22a-69-1.3. Coordination with other laws**

(a) Nothing in these Regulations shall authorize the construction or operation of a stationary noise source in violation of the requirements of any other applicable State law or regulation.

(b) Nothing in these Regulations shall authorize the sale, use or operation of a noise source in violation of the laws and regulations of the Connecticut Department of Motor Vehicles, the Federal Aviation Administration, the U.S. Environmental Protection Agency, or any amendments thereto.

(Effective June 15, 1978)

### **Sec. 22a-69-1.4. Incorporation by reference**

(a) The specifications, standards and codes of agencies of the U.S. Government and organizations which are not agencies of the U.S. Government, to the extent that they are legally incorporated by reference in these Regulations, have the same force and effect as other standards in these Regulations.

(b) These specifications, standards and codes may be examined at the Office of Noise Control, Department of Environmental Protection, State of Connecticut.

(c) Any changes in the specifications, standards and codes incorporated in these Regulations are available at the Office listed in (b) above. All questions as to the applicability of such changes should also be referred to this Office.

(Effective June 15, 1978)

**Sec. 22a-69-1.5. Compliance with regulations no defense to nuisance claim**

Nothing in any portion of these Regulations shall in any manner be construed as authorizing or legalizing the creation or maintenance of a nuisance, and compliance of a source with these Regulations is not a bar to a claim of nuisance by any person. A violation of any portion of these Regulations shall not be deemed to create a nuisance per se.

(Effective June 15, 1978)

**Sec. 22a-69-1.6. Severability**

If any provision of these Regulations or the application thereof to any person or circumstances is held to be invalid, such invalidity shall not affect other provisions or applications of any other part of these Regulations which can be given effect without the invalid provisions or application; and to this end, the provisions of these Regulations and the various applications thereof are declared to be severable.

(Effective June 15, 1978)

**Sec. 22a-69-1.7. Exclusions**

These Regulations shall not apply to:

(a) Sound generated by natural phenomena, including, but not limited to, wind, storms, insects, amphibious creatures, birds, and water flowing in its natural course.

(b) The unamplified sounding of the human voice.

(c) The unamplified sound made by any wild or domestic animal.

(d) Sound created by bells, carillons, or chimes associated with specific religious observances.

(e) Sound created by a public emergency sound signal attached to an authorized emergency vehicle in the immediate act of responding to an emergency, as authorized by subsection (d) of Section 14-80 and Section 14-1a of Chapter 246 of the General Statutes and all amendments thereto, or located within or attached to a building, pole or other structure for the purpose of sounding an alarm relating to fire or civil preparedness.

(f) Sound created by safety and protective devices.

(g) Farming equipment or farming activity.

(h) Back-up alarms required by OSHA or other State or Federal safety regulations.

(i) Sound created by any mobile source of noise. Mobile sources of noise shall include, but are not limited to, such sources as aircraft, automobiles, trucks, and boats. This exclusion shall cease to apply when a mobile source of noise has maneuvered into position at the loading dock, or similar facility, has turned off its engine and ancillary equipment, and has begun the physical process of removing the contents of the vehicle.

(Effective June 15, 1978)

#### **Sec. 22a-69-1.8. Exemptions**

Exempted from these Regulations are:

(a) Conditions caused by natural phenomena, strike, riot, catastrophe, or other condition over which the apparent violator has no control.

(b) Noise generated by engine-powered or motor-driven lawn care or maintenance equipment shall be exempted between the hours of 7:00 a.m. and 9:00 p.m. provided that noise discharged from exhausts is adequately muffled to prevent loud and/or explosive noises therefrom.

(c) Noises created by snow removal equipment at any time shall be exempted provided that such equipment shall be maintained in good repair so as to minimize noise, and noise discharged from exhausts shall be adequately muffled to prevent loud and/or explosive noises therefrom.

(d) Noise that originates at airports that is directly caused by aircraft flight operations specifically preempted by the Federal Aviation Administration.

(e) Noise created by the use of property for purposes of conducting speed or endurance events involving motor vehicles shall be exempted but such exemption is effective only during the specific period(s) of time within which such use is authorized by the political subdivision or governmental entity having lawful jurisdiction to sanction such use.

(f) Noise created as a result of, or relating to, an emergency.

(g) Construction noise.

(h) Noise created by blasting other than that conducted in connection with construction activities shall be exempted provided that the blasting is conducted between 8:00 a.m. and 5:00 p.m. local time at specified hours previously announced to the local public, or provided that a permit for such blasting has been obtained from local authorities.

(i) Noise created by on-site recreational or sporting activity which is sanctioned by the state or local government provided that noise discharged from exhausts is adequately muffled to prevent loud and/or explosive noises therefrom.

(j) Patriotic or public celebrations not extending longer than one calendar day.

(k) Noise created by aircraft, or aircraft propulsion components designed for or utilized in the development of aircraft, under test conditions.

(l) Noise created by products undergoing test, where one of the primary purposes of the test is evaluation of product noise characteristics and where practical noise control measures have been taken.

(m) Noise generated by transmission facilities, distribution facilities and substations of public utilities providing electrical powers, telephone, cable television or other similar services and located on property which is not owned by the public utility and which may or may not be within utility easements.

(Effective June 15, 1978)

#### **Sec. 22a-69-1.9. Burden of persuasion regarding exclusions and exemptions**

In any proceeding pursuant to these Regulations, the burden of persuasion shall rest with the party attempting to enforce the Regulations. Notwithstanding the foregoing, if an exclusion or exemption stated in these Regulations 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 exclusion or exemption shall have the burden of persuasion that the exclusion or exemption applies and that the terms of the exclusion or exemption have been met. The Department shall cooperate with and assist persons in determining the application of the provisions of these Regulations.

(Effective June 15, 1978)

#### **Sec. 22a-69-2. Classification of land according to use**

##### **Sec. 22a-69-2.1. Basis**

Noisy Zone classifications shall be based on the actual use of any parcel or tract under single ownership as detailed by the Standard Land Use Classification Manual of Connecticut (SLUCONN).

(Effective June 15, 1978)

##### **Sec. 22a-69-2.2. Multiple uses**

Where multiple uses exist within a given Noise Zone, the least restrictive land use category for the Emitter and Receptor shall apply regarding the noise standards specified in Section 3 of these Regulations.

(Effective June 15, 1978)

##### **Sec. 22a-69-2.3. Class A noise zone**

Lands designated Class A shall generally be residential areas where human beings sleep or areas where serenity and tranquility are essential to the intended use of the land.

**Class A Land Use Category.** The land uses in this category shall include, but not be limited to, single and multiple family homes, hotels, prisons, hospitals, religious facilities, cultural activities, forest preserves, and land intended for residential or special uses requiring such protection.

The specific SLUCONN categories in Class A shall include:

1. Residential
    - 11 Household Units\*
    - 12 Group Quarters
    - 13 Mobile Home Parks and Courts
    - 19 Other Residential
  5. Trade
    - 583 Residential Hotels
    - 584 Hotels, Tourist Courts and Motels
    - 585 Transient Lodgings
  6. Services
    - 651 Medical and Other Health Services; Hospitals
    - 674 Correctional Institutions
    - 691 Religious Activities
  7. Cultural, Entertainment and Recreational
    - 711 Cultural Activities
    - 712 Nature Exhibitions
    - 713 Historic and Monument Sites
- \*Mobile homes are included if on foundations
9. Undeveloped, Unused and Reserved Lands and Water Areas
    - 92 Reserved Lands
    - 941 Vacant Floor Area—Residential
- (Effective June 15, 1978)

**Sec. 22a-69-2.4. Class B noise zone**

Lands designated Class B shall generally be commercial in nature, areas where human beings converse and such conversation is essential to the intended use of the land.

**Class B Land Use Category.** The land uses in this category shall include, but not be limited to, retail trade, personal, business and legal services, educational institutions, government services, amusements, agricultural activities, and lands intended for such commercial or institutional uses.

The specific SLUCONN categories in Class B shall include:

4. Transportation, Communication and Utilities
  - 46 Automobile Parking
  - 47 Communication
5. Trade
  - 51 Wholesale Trade
  - 52 Retail Trade - Building Materials
  - 53 Retail Trade - General Merchandise
  - 54 Retail Trade - Food



- 55 Retail Trade - Automotive Dealers and Gasoline Service Stations
- 56 Retail Trade - Apparel and Accessories
- 57 Retail Trade - Furniture, Home Furnishings and Equipment
- 58 Retail Trade - Eating, Drinking and Lodging—Except 583, 584, and 585
- 59 Retail Trade - N.E.C.\*
- 6. Services
  - 61 Finance, Insurance and Real Estate Services
  - 62 Personal Services
  - 63 Business Services—Except 637
  - 64 Repair Services
  - 65 Professional Services—Except 651
  - 67 Government Services—Except 672, 674, and 675
  - 68 Educational Services
  - 69 Miscellaneous Services—Except 691
- 7. Cultural, Entertainment and Recreational
  - 71 Cultural Activities and Nature Exhibitions—Except 711, 712, and 713
  - 72 Public Assembly
  - 73 Amusements
  - 74 Recreational Activities
  - 75 Resorts and Group Camps
  - 76 Parks
  - 79 Other, N.E.C.\*
- \*Not Elsewhere Classified
  - 8. Agriculture
    - 81 Agriculture
    - 82 Agricultural Related Activities
  - 9. Undeveloped, Unused, and Reserved Lands and Water Area
    - 91 Undeveloped and Unused Land Area
    - 93 Water Areas
    - 94 Vacant Floor Area—Except 941
    - 99 Other Undeveloped Land and Water Areas, N.E.C.\*
- \*Not Elsewhere Classified  
(Effective June 15, 1978)

**Sec. 22a-69-2.5. Class C noise zone**

Lands designated Class C shall generally be industrial where protection against damage to hearing is essential, and the necessity for conversation is limited.

**Class C Land Use Category.** The land uses in this category shall include, but not be limited to, manufacturing activities, transportation facilities, warehousing, military bases, mining, and other lands intended for such uses.

The specific SLUCONN categories in Class C shall include:

- 2. Manufacturing - Secondary Raw Materials
- 3. Manufacturing - Primary Raw Materials

4. Transportation, Communications and Utilities—  
Except 46 and 47

6. Services

637 Warehousing and Storage Services

66 Contract Construction Services

672 Protective Functions and Related Activities

675 Military Bases and Reservations

8. Agriculture

83 Forestry Activities and Related Services

84 Commercial Fishing Activities and Related Services

85 Mining Activities and Related Services

89 Other Resource Production and Extraction, N.E.C.\*

\*Not Elsewhere Classified

(Effective June 15, 1978)

Sec. 22a-69-3. Allowable noise levels

Sec. 22a-69-3.1. General prohibition

No person shall cause or allow the emission of excessive noise beyond the boundaries of his/her Noise Zone so as to violate any provisions of these Regulations.

(Effective June 15, 1978)

Sec. 22a-69-3.2. Impulse noise

(a) No person shall cause or allow the emission of impulse noise in excess of 80 dB peak sound pressure level during the nighttime to any Class A Noise Zone.

(b) No person shall cause or allow the emission of impulse noise in excess of 100 dB peak sound pressure at any time to any Noise Zone.

(Effective June 15, 1978)

Sec. 22a-69-3.3. Prominent discrete tones

Continuous noise measured beyond the boundary of the Noise Zone of the noise emitter in any other Noise Zone which possesses one or more audible discrete tones shall be considered excessive noise when a level of 5 dBA below the levels specified in Section 3 of these Regulations is exceeded.

(Effective June 15, 1978)

Sec. 22a-69-3.4. Infrasonic and ultrasonic

No person shall emit beyond his/her property infrasonic or ultrasonic sound in excess of 100 dB at any time.

(Effective June 15, 1978)

Sec. 22a-69-3.5. Noise zone standards

(a) No person in a Class C Noise Zone shall emit noise exceeding the levels stated herein and applicable to adjacent Noise Zones:

	<i>Receptor</i>			
	<i>C</i>	<i>B</i>	<i>A/Day</i>	<i>A/Night</i>
<i>Class C Emitter to</i>	70 dBA	68 dBA	61 dBA	51 dBA

Levels emitted in excess of the values listed above shall be considered excessive noise.

(b) No person in a Class B Noise Zone shall emit noise exceeding the levels stated herein and applicable to adjacent Noise Zones:

		<del>Receptor</del>	
		<del>Class B</del>	<del>A/Day A/Night</del>
<del>Class B Emitter to</del>	<del>62 dBA 62 dBA</del>	<del>65 dBA</del>	<del>45 dBA</del>

Levels emitted in excess of the values listed above shall be considered excessive noise.

(c) No person in a Class A Noise Zone shall emit noise exceeding the levels stated herein and applicable to adjacent Noise Zones:

		<del>Receptor</del>	
		<del>Class A</del>	<del>A/Day A/Night</del>
<del>Class A Emitter to</del>	<del>62 dBA 55 dBA</del>	<del>65 dBA</del>	<del>45 dBA</del>

Levels emitted in excess of the values listed above shall be considered excessive noise.

(Effective June 15, 1978)

#### Sec. 22a-69-3.6. High background noise areas

In those individual cases where the background noise levels caused by sources not subject to these Regulations exceed the standards contained herein, a source shall be considered to cause excessive noise if the noise emitted by such source exceeds the background noise level by 5 dBA, provided that no source subject to the provisions of Section 3 shall emit noise in excess of 80 dBA at any time, and provided that this Section does not decrease the permissible levels of the other Sections of this Regulation.

(Effective June 15, 1978)

#### Sec. 22a-69-3.7. Existing noise sources

Existing noise sources constructed between the effective date of these Regulations and January 1, 1960 shall be provided a permanent five (5) dBA maximum noise level allowance over levels otherwise herein required regardless of subsequent changes in ownership or facility utilization processes at the location of the existing noise source. Existing noise sources constructed prior to 1960 shall be provided a permanent ten (10) dBA maximum noise level allowance over levels otherwise herein required regardless of subsequent changes in ownership or facility utilization processes at the location of the existing noise source. Additionally, all existing noise sources shall be provided twenty-four (24) months in order to achieve compliance with these Regulations if a notice of violation has been, or may be, issued to the source. This time period begins with the effective date of these Regulations, not with the date of the notice of violation.

(Effective June 15, 1978)

**Sec. 22a-69-3.8. Adaptive reuse of existing buildings**

Buildings and other structures that exist as of the effective date of these Regulations which have been remodeled or converted for adaptive reuse or which may be remodeled or converted at a future date shall be provided a permanent five (5) dBA maximum noise level allowance above the Emitter Class of the new use of the building over levels otherwise herein required.

(Effective June 15, 1978)

**Sec. 22a-69-4. Measurement procedures**

Acoustic measurements to ascertain compliance with these Regulations shall be in substantial conformity with standards and Recommended Practices established by professional organizations such as ANSI and SAE.

(a) Personnel conducting sound measurements shall be trained and experienced in the current techniques and principles of sound measuring equipment and instrumentation. The Commissioner shall establish sufficiently detailed measurement procedure guidelines specifying, but not necessarily being limited to, the following: The appropriate utilization of fast or slow sound level meter dampening when making sound level measurements, the rise time specified in microseconds for measuring impulse noise, the need for a whole circuit in such measurements, and the proper weighting to be used in measuring impulse noise.

(b) Instruments shall conform to the following standards of their latest revisions:

(i) ANSI S1.4-1971, "Specifications for Sound Level Meters," Type 1 or 2.

(ii) ANSI S1.11-1966, "Specifications for Octave, One-Half Octave and One-Third Octave Band Filter Sets," Type E, Class II.

(iii) If a magnetic tape recorder or a graphic level recorder or other indicating device is used, the system shall meet the applicable requirements of SAE Recommended Practice J184, "Qualifying a Sound Data Acquisition System."

(c) Instruments shall be set up to conform to ANSI S1.13-1971, "Methods for the Measurement of Sound Pressure Levels."

(d) Instrument manufacturer's instructions for use of the instruments shall be followed, including acoustical calibration of equipment used.

(e) The determination of  $L_{90}$  to ascertain background levels requires a statistical analysis. A graphic level recording and visual interpretation of the chart recording to determine the levels is an acceptable method. Instruments designed to determine the cumulative distribution of noise levels are also acceptable used either in the field or in the laboratory to analyze a tape recording. Dynamic visual estimations from a sound level meter

are not an acceptable method for determining such levels. Sound level sampling techniques are acceptable and will often be the most practical to employ. Such a technique using Connecticut Noise Survey Data Form #101 with accompanying instructions is acceptable.

(f) In measuring compliance with Noise Zone Standards, the following short-term noise level excursions over the noise level standards established by these Regulations shall be allowed, and measurements within these ranges of established standards shall constitute compliance therewith:

<del>Allowable levels</del> <del>above standards</del> (dBd)	<del>Time period of</del> <del>such levels</del> (minutes/hour)
3	15
6	4 1/2
8	5

(g) Measurements taken to determine compliance with Section 3 shall be taken at about one foot beyond the boundary of the Emitter Noise Zone within the receptor's Noise Zone. The Emitter's Noise Zone includes his/her individual unit of land or group of contiguous parcels under the same ownership as indicated by public land records. The Emitter's Noise Zone also includes contiguous publicly dedicated street and highway rights-of-way, railroads rights-of-way and waters of the State.  
(Effective June 15, 1978)

#### Sec. 22a-69-5. Other provisions

##### Sec. 22a-69-5.1. Intrusion alarms

No person shall cause, suffer, allow or permit the operation of any intrusion alarm which, from time of activation of audible signal, emits noise for a period of time exceeding ten minutes when attached to any vehicle or thirty minutes when attached to any building or structure.

The repetition of activation of the audible signal of an intrusion alarm due to malfunction, lack of proper maintenance, or lack of reasonable care shall be considered excessive noise.

(Effective June 15, 1978)

#### Sec. 22a-69-6. Airport facilities

##### Sec. 22a-69-6.1. Extent of regulation

Airport facilities are subject to Section 3 to the extent not preempted by state or federal law or regulation.

(Effective June 15, 1978)

##### Sec. 22a-69-6.2. Reserved

(This subsection is reserved for possible future regulations regarding the assessment of, and long-range plans

for, the reduction of airport facility noise impacts to the extent not preempted by state or federal law or regulation.)

(Effective June 15, 1978)

**Sec. 22a-69-7. Variances and enforcement procedures**

**Sec. 22a-69-7.1. Variances**

(a) Any person who owns or operates any stationary noise source may apply to the Commissioner for a variance or a partial variance from one or more of the provisions of these Regulations. Applications for a variance shall be submitted on forms furnished by the Commissioner and shall supply such information as he/she requires, including, but not limited to:

(i) Information on the nature and location of the facility or process for which such application is made.

(ii) The reason for which the variance is required, including the economic and technical justifications.

(iii) The nature and intensity of noise that will occur during the period of the variance.

(iv) A description of interim noise control measures to be taken by the applicant to minimize noise and the impacts occurring therefrom.

(v) A specific schedule of the best practical noise control measures, if any, which might be taken to bring the source into compliance with those Regulations from which a variance is sought, or a statement of the length of time during which it is estimated that it will be necessary for the variance to continue.

(vi) Any other relevant information the Commissioner may require in order to make a determination regarding the application.

(b) Failure to supply the information required by the form furnished by the Commissioner shall be cause for rejection of the application unless the applicant supplies the needed information within thirty (30) days of the written request by the Commissioner for such information.

(c) No variance shall be approved unless the applicant presents adequate proof to the Commissioner's satisfaction that:

(i) Noise levels occurring during the period of the variance will not constitute a danger to the public health; and

(ii) Compliance with the Regulations would impose an arbitrary or unreasonable hardship upon the applicant without equal or greater benefits to the public.

(d) In making a determination on granting a variance, the Commissioner shall consider:

(i) The character and degree of injury to, or interference with, the health and welfare or the reasonable use of property which is caused or threatened to be caused.

(ii) The social and economic value of the activity for which the variance is sought.

(iii) The ability of the applicant to apply best practical noise control measures, as defined in these Regulations.

(e) Following receipt and review of an application for a variance, the Commissioner shall fix a date, time and location for a hearing on such application.

(f) The Commissioner shall cause the applicant to publish at his/her own expense all notices of hearings and other notices required by law, including, but not limited to, notification of all abutters of record.

(g) Within sixty (60) days of the receipt of the record of the hearings on a variance application, the Commissioner shall issue his/her determination regarding such application. All such decisions shall briefly set forth the reasons for the decision.

(h) The Commissioner may, at his/her discretion, limit the duration of any variance granted under these Regulations. Any person holding a variance and needing an extension of time may apply for a new variance under the provisions of these Regulations. Any such application shall include a certification of compliance with any condition imposed under the previous variance.

(i) The Commissioner may attach to any variance any reasonable conditions he/she deems necessary and desirable, including, but not limited to:

(i) Requirements for the best practical noise control measures to be taken by the owner or operator of the source to minimize noise during the period of the variance.

(ii) Requirements for periodic reports submitted by the applicant relating to noise, to compliance with any other conditions under which the variance was granted or to any other information the Commissioner deems necessary.

(j) The filing of an application for a variance shall operate as a stay of prosecution, except that such stay may be terminated by the Commissioner upon application of any party if the Commissioner finds that protection of the public health so requires.

(k) In any case where a person seeking a variance contends that compliance with any provision of these Regulations is not practical or possible because of the cost involved either in installing noise control equipment or changing or curtailing the operation in any manner, he/she shall make available to the Commissioner such financial records as the Commissioner may require.

(l) A variance may include a compliance schedule and requirements for periodic reporting of increments of achievement of compliance.

(Effective June 15, 1978)

**Sec. 22a-69-7.2. Transference**

No person who owns, operates or maintains a stationary noise source shall transfer a variance from one site to another site.

(Effective June 15, 1978)

**Sec. 22a-69-7.3. Responsibility to comply with applicable regulations**

Approval of a variance shall not relieve any person of the responsibility to comply with any other applicable Regulations or other provisions of federal, state or local laws, ordinances or regulations.

(Effective June 15, 1978)

**Sec. 22a-69-7.4. Violations and enforcement**

(a) No person shall violate or cause the violation of any of these Regulations.

(b) Each day on which a violation occurs or continues after the time for correction of the violation given in the order has elapsed or after thirty (30) days from the date of service of the order, whichever is later, shall be considered a separate violation of these Regulations.

(c) Qualified personnel of the Office of Noise Control shall, with or without complaints, conduct investigations and ascertain whether these Regulations have been complied with. Whenever such personnel determines that any of these Regulations have been violated or there has been a failure to comply therewith, they shall make and serve upon the person(s) responsible for the violation a written order specifying the nature of the violation or failure and affording a reasonable time for its correction or remedy. Prior to the issuance of such order, such personnel shall make a reasonable effort in light of the circumstances to correct a violation or achieve compliance by means of conference, conciliation and persuasion as required by statute. Unless the person(s) against whom an order has been served files a written answer thereto with the Commissioner within thirty (30) days after the date of service of the order and requests a hearing thereon, such order shall become final and effective in accordance with the Connecticut Administrative Procedures Act and the rules, practices, and procedures of the Department of Environmental Protection.

(Effective June 15, 1978)



DELAWARE NOISE REGULATIONS





JUL 8 1982 63 369

DELAWARE STATE SENATE  
131ST GENERAL ASSEMBLY

SENATE BILL NO. 600  
AS AMENDED BY  
SENATE AMENDMENT NO. 1

AN ACT TO AMEND AND REVISE CHAPTER 71, TITLE 7 OF THE DELAWARE CODE RELATING TO NOISE CONTROL AND ABATEMENT.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF DELAWARE (Two-thirds of all members elected to each House thereof concurring therein):

Section 1: Amend Chapter 71, Title 7 of the Delaware Code by striking all of said chapter and inserting in lieu thereof the following:

"Chapter 71. Noise Control and Abatement

Subchapter 1. Non-Vehicle Provisions

§7101. Declaration of Purpose

The Delaware General Assembly finds and determines that the people of this State are entitled to and should be ensured an environment free from noise which unnecessarily degrades the quality of their life; that the levels of noise often reach such a degree as to endanger the health, safety and welfare, jeopardize the value of property and erode the integrity of the environment of the people of this State.

The General Assembly also finds that a substantial body of science and technology exists by which noise may be substantially abated; and that the dangers of excessive noise can be abated by the adoption and enforcement of noise standards embodied in regulations based upon these scientific and technological findings.

The General Assembly also finds that the problem of combating noise involves a high degree of cooperation on the part of various State agencies and departments; this Act makes specific provisions for such inter-agency cooperation.

**S7102. Short Title**

This Act shall be known and may be cited as the Delaware Noise Control Act.

**S7103. Definitions**

(a) "Committee" shall mean the Noise Advisory Committee created under the provisions of this Act.

(b) "Farming operations" shall mean any activity which is involved in the production of agriculture, livestock, dairy or poultry products for sale.

(c) "Farm vehicle" shall mean a wheeled device used for transportation in farming operations.

(d) "Manufacturer" shall mean any person employing five or more employees and who is licensed as a manufacturer by the Department of Finance in accordance with the provisions of Chapter 27, Title 30 of the Delaware Code.

(e) "Motor vehicle" shall mean any vehicle defined as a motor vehicle in accordance with the provisions of §101, Chapter 1, Title 21 of the Delaware Code.

(f) "Noise" shall mean any sound which annoys or disturbs humans or which causes or tends to cause an adverse psychological or physiological effect on humans, excluding all aspects of noise regulated by the Federal Occupational Safety and Health Act (OSHA).

(g) "Noise disturbance" means any sound which (1) endangers or injures the safety or health of humans or animals or (2) annoys or disturbs a reasonable person of normal sensitivities, or (3) jeopardizes the value of property and erodes the integrity of the environment.

(h) "Person" shall mean any corporation, company, association, society, firm, partnership, and any joint stock company, as well as individuals; and shall also include the State and all of its political subdivisions; agencies and instrumentalities as well as any department, board or agency of the government of the United States.

(i) "Secretary" shall mean the Secretary of the Department of Natural Resources and Environmental Control.

**S7104. Noise and Noise Disturbance Prohibited**

(a) No person shall, without first having obtained a variance or a temporary emergency variance from the Department of Natural Resources and Environmental Control, undertake any activity which in any way may cause or contribute to the creation of noise or a noise disturbance.

(b) No person shall, without having first obtained a variance or a temporary emergency variance from the Department of Natural Resources and Environmental Control, construct, install, replace, modify or use any equipment, machinery, motor vehicle, device or other article which in any way may cause or contribute to the creation of noise or a noise disturbance.

**§7105. Administration of this Act**

The Secretary of the Department of Natural Resources and Environmental Control or his duly authorized designee shall exercise general supervision over the administration of this Chapter and, in conjunction with the various law enforcement agencies of this State, the enforcement of the provisions of this Chapter, and shall have jurisdiction over noise emanating from motor vehicles to the extent of approving standards, codes and regulations proposed by the Secretary of the Department of Public Safety.

The Secretary of the Department of Public Safety shall exercise general supervision over the administration and enforcement of the provisions of this Chapter with regard to noise emanating from motor vehicles.

The provisions of this Subchapter shall not apply to noise caused or created by the work of any public service company incident to the repair or maintenance of its equipment or facilities which may have been damaged or destroyed as the result of any emergency situation including but not limited to acts of God, accidents and explosions.

**§7106. Powers and Duties of the Department of Natural Resources and Environmental Control**

The Department of Natural Resources and Environmental Control shall have the power and its duty shall be to:

(a) adopt standards, rules and regulations, after public hearing, for the prevention, control, reduction and abatement of noise pollution, applicable throughout the State or to such parts or regions thereof specifically designated in such regulations. The procedure for public hearings shall conform to the procedure described in §6006(2), Chapter 60, Title 7 of the Delaware Code; such rules and regulations, however, shall not purport to exercise jurisdiction over any person or activity not included or affected by the provisions of this Subchapter;

(b) cooperate with all other State departments, divisions and agencies in the formulation and preparation of rules and regulations for the control of noise;

(c) enter into agreements with any other State department in order to affectuate the provisions of this Chapter;

(d) enforce the provisions of this Chapter, and all regulations, codes and rules, promulgated pursuant thereto, except those provisions of this Chapter pertaining to motor vehicles;

(e) in conjunction with the various law enforcement agencies of this State, receive or initiate complaints of noise and institute legal proceedings for the prevention of noise and for the recovery of penalties, in accordance with the provisions of this Chapter;

(f) keep records of violations cited, enforcement procedures initiated and completed in accordance with the provisions of this section;

**§7107. Authority of the Department of Natural Resources and Environmental Control**

The Department of Natural Resources and Environmental Control shall have the authority to:

(a) conduct and supervise research programs for the purpose of determining the causes, effects and hazards of noise;

(b) conduct and supervise Statewide programs of noise control education, including the preparation and distribution of information relating to noise control;

(c) enter and inspect any building or place, except private residences, for the purpose of investigating an actual or suspected source of noise and ascertaining compliance or non-compliance of any statute, rule or regulation of the Department. Any information relating to secret processes or methods of manufacture or production obtained in the course of such inspection, investigation or determination shall be kept confidential and shall not be admissible in evidence in any court or in any other proceedings except to the extent herein provided. If tests of any type are made for the purpose of determining whether or not a violation has occurred, or for any other purpose in connection with such entry and inspection, a duplicate of the results of the tests shall be furnished promptly to the person suspected of violating the statute, code or regulation;

(d) with the approval of the Governor, cooperate with and receive money from the Federal government, the State government or any county or municipal government or from private sources for the study and control of noise; and

(e) review and approve any plan to construct any highway corridor; the construction or operation of which may in the opinion of the Department cause or contribute to an amount of noise deemed excessive by the Department.

**§7108. Enforcement and Penalties; Non-Vehicle Violations**

(a) The Department of Natural Resources and Environmental Control shall enforce the provisions of this Chapter and any duly promulgated rules and regulations. All law enforcement agencies of this State, including but not limited to police forces of the Counties and incorporated cities and towns, may also enforce the provisions of this Chapter and any duly promulgated rules and regulations.

(b) Whenever the Department of Natural Resources and Environmental Control or any law enforcement agency within this State has cause to believe based upon observation or a complaint

that any person is violating this Chapter, or any rules or regulations promulgated in accordance with this Chapter, the Department or law enforcement agency is authorized to conduct an investigation in connection therewith.

(c) If upon investigation the Department of Natural Resources and Environmental Control or any law enforcement officer of this State discovers a condition which is in violation of any provision of this Chapter or any rule or regulation promulgated pursuant thereto, the Department or law enforcement officer shall be authorized to order such violation to cease and may take such reasonable steps as are necessary to enforce such an order. The order shall state why a violation exists and shall provide a reasonably specified time within which the violation must cease.

(d) The person responsible for the violation shall make the corrections necessary to comply with the requirements of this Chapter or any rule or regulation promulgated pursuant thereto within the time specified in the order.

(e) Nothing herein shall be deemed to prevent the Department of Natural Resources and Environmental Control or any other law enforcement agency of this State from prosecuting any violation of this Chapter or any rule or regulation promulgated pursuant thereto, notwithstanding that such violation is corrected in accordance with the above order.

(f) In his discretion, the Secretary of the Department of Natural Resources and Environmental Control may endeavor by conciliation to obtain compliance with all requirements of this Chapter or any rule or regulation promulgated pursuant thereto. Conciliation shall be attempted by giving written notice to the responsible party which: (i) specifies the violation (ii) proposes a reasonable time for its correction, and (iii) advises that a cease and desist order may be issued or other action taken unless the violation is corrected.

(g) If a violation is threatening to begin, or is continuing, or if there is a substantial likelihood that it will reoccur, or if the Department of Natural Resources and Environmental Control receives information that a noise disturbance presents an imminent or substantial hazard to public health or to the environment, the Secretary of the Department of Natural Resources may, in addition to or in lieu of any other remedy provided for in this Chapter, seek a temporary restraining order or a preliminary or permanent injunction in the Court of Chancery.

(h) Whoever violates this Chapter or any rule or regulation duly promulgated thereunder, or any variance or temporary emergency variance issued pursuant to §7108 or §7109 of this title or any cease and desist order of the Secretary, shall be punished by a fine of not less than \$25 nor more than \$500 for each violation. Each day of violation shall be considered as a separate violation. Any court of competent jurisdiction shall have jurisdiction of offenses under this subsection.

(i) Any person who wilfully or negligently violates this Chapter or any rule or regulation duly promulgated thereunder, or any variance or temporary emergency variance or any cease and desist order of the Secretary shall be punished by a penalty of not less than \$500 nor more than \$3000 for each day of such violation. The Superior Court shall have jurisdiction of offenses under this subsection.

(j) It shall be a misdemeanor for any person to obstruct, hinder, delay, or interfere with, by force or otherwise, the performance by personnel of the Department of Natural Resources and Environmental Control or any other enforcement personnel of any duty under the provisions of this Chapter, or any rule or regulation or order or permit or decision promulgated or issued thereunder.

#### S7109. Variance

(a) Any person who owns or operates any stationary noise source may apply to the Secretary of the Department of Natural Resources and Environmental Control for a variance or a partial variance from one or more of the rules or regulations promulgated pursuant to this Chapter.

Applicants for a variance shall supply information including, but not limited to:

(i) Information on the nature and location of the facility or process for which such application is made.

(ii) The reason for which the variance is required, including the economic and technical justifications.

(iii) The nature and intensity of noise that will occur during the period of the variance.

(iv) A description of interim noise control measures to be taken by the applicant to minimize noise and the impacts occurring therefrom.

(v) A specific schedule of the best practical noise control measures, if any, which might be taken to bring the source into compliance with those regulations from which a variance is sought, and a statement of the length of time during which it is estimated that it will be necessary for the variance to continue.

(vi) Any other relevant information the Department may require in order to make a determination regarding the application.

(b) Failure to supply the information required shall be cause for rejection of the application unless the applicant supplies the needed information within thirty (30) days of the written request by the Department for such information.

(c) No variance shall be approved unless the Secretary finds that:

(i) Noise levels occurring during the period of the variance will not constitute a danger to the public health; and



(ii) Compliance with this Chapter and any duly promulgated rules or regulations would impose an arbitrary or unreasonable hardship upon the applicant without a commensurate benefit to the public.

(d) In determining whether to grant a variance, the Secretary shall consider:

(i) The character and degree of injury to, or interference with, the health and welfare of people or the reasonable use of property which is caused or threatened to be caused by the noise during the variance period.

(ii) The social and economic value of the activity for which the variance is sought.

(iii) The ability of the applicant to apply best practical noise control measures, as defined in duly promulgated regulations.

(e) Following receipt and review of an application for a variance, and after publishing notice once a week for two weeks in a newspaper of general circulation in the County wherein the variance is proposed, the Department shall, if necessary, fix a date, time and location for a hearing on such application in accordance with 7 Del. C., Chapter 60, §6004. Costs of newspaper advertising are to be paid by the applicant.

(f) Within ten (10) days of the receipt of the record of a hearing on a variance application, or within ten (10) days of receipt of an application on which no hearing is held, the Department shall issue its determination regarding such application and provide a copy to affected parties. All such decisions shall briefly set forth the reasons for the decision.

(g) The Department may, in its discretion, limit the duration of any variance granted. Any person holding a variance and needing an extension of time may apply for a new variance under the provisions of this Chapter and any duly promulgated rules and regulations for a period not to exceed one year. Any such application shall include a certification of compliance with any condition imposed under the previous variance.

(h) The Department may attach to any variance any reasonable conditions it deems necessary and desirable, including, but not limited to:

(i) Requirements for the best practical noise control measures to be taken by the owner or operator of the source to minimize noise during the period of the variance.

(ii) Requirements for periodic reports submitted by the applicant relating to noise, to compliance with any other conditions under which the variance was granted or to any other information the Department deems necessary.

(i) A variance may include a compliance schedule and requirements for periodic reporting of increments of achievement of compliance.

**S7110. Temporary Emergency Variance**

(a) A temporary emergency variance may be granted by the Department:

(i) If a severe hardship would be caused by the time period involved in obtaining a full variance.

(ii) If the emergency is of an unforeseen nature so as to preclude a full variance because of time limitations.

(iii) If all conditions comply with those required for a full variance. ♦

(iv) For a period not to exceed 60 days, not to be extended more than once.

(b) The granting of any temporary emergency variance shall be published within 5 days of the granting in a newspaper of general circulation once a week for two weeks in the county where the applicant resides.

**S7111. Testimony at Hearings**

Testimony taken at any hearing shall be under oath and recorded stenographically, but the parties shall not be bound by the strict rules of evidence prevailing in the courts of Law and Equity. True copies of any transcript and of any other record made of or at such hearings shall be furnished to any party thereto upon request, and at his expense. Applicants shall pay for any and all stenographer's fees and, if requested, copies of the transcript.

**S7112. Conduct of Hearings**

Any administrative or non-judicial hearings required by this Chapter shall be held before the Secretary of the Department of Natural Resources and Environmental Control or before members of the Department designated by the Secretary. The Secretary, or persons designated by him to hear the case, shall have the power to subpoena witnesses and compel their attendance, administer oaths and require the production for examination of any books or papers relating to any matter under investigation in any such hearing. The respondent to a complaint made by it, or to it, pursuant to this Chapter, shall subpoena and compel the attendance of such witnesses as the respondent may designate and require the production for examination of any books or papers relating to any matter under investigation in any such hearing.

**S7113. Appeals of Final Orders: Environmental Appeals  
Board; Superior Court**

(a) Any person or persons who jointly or severally are substantially affected and aggrieved by any final order or variance of the Department, or any taxpayer, or any officer, department, board or bureau of the State may appeal that order to the State Environmental Appeals Board and to the Superior Court as provided in 7 Del. C. §6008 and §6009 except that the word "variance" shall be substituted for the word "permit" in §6008(b) and (e).

(b) No appeal shall operate to stay automatically any action of the Secretary, but upon application, and for good cause, the Secretary or the Court of Chancery may stay the action pending disposition of the appeal.

#### Subchapter II. MOTOR VEHICLES

##### §7120. Powers and Duties of the Department of Public Safety

(a) The Department of Public Safety, after consideration with the Secretary of the Department of Transportation and upon approval of the Secretary of the Department of Natural Resources and Environmental Control, shall have the power and its duty shall be to:

(i) adopt regulations, after public hearing, establishing the standards, test procedures and instrumentation to be utilized in the control of noise from motor vehicles;

(ii) adopt regulations, after public hearing, necessary for the inspection of motor vehicles, including noise control and abatement equipment to assure compliance with the noise standards promulgated by the Department.

(b) For any public hearings required by the provisions of this Subchapter, the procedure shall conform to the procedure established in §6006, Chapter 60, Title 7 of the Delaware Code.

##### §7121. Motor Vehicle Noise Inspection

Any motor vehicle which is subject to inspection by the Division of Motor Vehicles or any other duly authorized body shall, as a condition of compliance with said inspection, pass such tests as may be required to demonstrate that the motor vehicle is in compliance with all State and Federal standards and requirements for the control of noise which are applicable to such motor vehicles.

##### §7122. Motor Vehicle Violations: Enforcement

Any person who operates a motor vehicle or owns a motor vehicle which he permits to be operated upon public highways of this State which generates noise in excess of standards adopted by the Department of Public Safety shall be fined not less than twenty-five dollars (\$25.00) nor more than one thousand dollars (\$1,000.00), which shall be enforced in accordance with the provisions of Chapter 7, Title 21 of the Delaware Code.

##### §7123. Liberal Interpretation

The powers, duties and functions vested in any State department under the provisions of this Chapter shall not be construed to limit in any manner the powers, duties and functions vested therein or in any person under any other provision of law, or any civil or criminal remedies now or hereafter available to any person related to community noise control.

**§7124. Other Ordinances or Remedies**

No existing civil or criminal remedy now or hereafter available to any person shall be superseded by this Chapter or any rule or regulation promulgated pursuant thereto.

No ordinances or resolutions of any governing body of a municipality or county or board of health which establish specific standards for the level or duration of community noise equivalent to or more stringent than those provided by this Chapter or any rule or regulation promulgated pursuant thereto shall be superseded. Nothing in this Chapter or in any rule or regulation promulgated pursuant thereto shall preclude the right of any governing body of a municipality or county board of health to adopt ordinances, resolutions or regulations which establish specific standards for the level or duration of community noise equivalent to or more stringent than this Chapter or any rule or regulation promulgated pursuant thereto.

**§7125. Exemptions**

(a) All farm vehicles are exempted from the provisions of this chapter while engaged in farming operations.

(b) Sirens operated to summon volunteer firemen to alarms and sirens used to summon ambulance crews to service calls are exempted from the provisions of this chapter.

**§7126. Validity of Act**

If any provision of this Act or the application thereto to any person or circumstances is held invalid, the remainder of the Act and the application of such provision to persons or circumstances other than those to which it is held invalid, shall not be affected thereby."

## ILLINOIS NOISE REGULATIONS





Illinois Environmental Protection Agency

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# ILLINOIS REVISED STATUTES 1989

STATE BAR ASSOCIATION EDITION

Containing  
The General and Permanent Laws of Illinois  
Through P.A. 86-1028 of the 86th General Assembly  
Convened January 11, 1989  
Adjourned July 1, 1989  
Reconvened October 4, 1989  
Adjourned sine die November 3, 1989

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Volume 4

Chapters 110 to 120  
Practice  
to  
Revenue

COMPILED AND EDITED  
UNDER  
SMITH-HURD CLASSIFICATION

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(b) "Director" means the Director of the Illinois Department of Public Health;

(c) "Program" means the Environmental Toxicology program as established by this Act;

(d) "Exposure" means contact with a hazardous substance;

(e) "Hazardous Substance" means chemical compounds, elements, or combinations of chemicals which, because of quantity concentration, physical characteristics or toxicological characteristics may pose a substantial present or potential hazard to human health and includes, but is not limited to, any substance defined as a hazardous substance in Section 3 of the "Environmental Protection Act", approved June 29, 1970, as amended;<sup>1</sup>

(f) "Initial Assessment" means a review and evaluation of site history and hazardous substances involved, potential for population exposure, the nature of any health related complaints and any known patterns in disease occurrence;

(g) "Comprehensive Health Study" means a detailed analysis which may include: a review of available environmental, morbidity and mortality data; environmental and biological sampling; detailed review of scientific literature; exposure analysis; population surveys; or any other scientific or epidemiologic methods deemed necessary to adequately evaluate the health status of the population at risk and any potential relationship to environmental factors;

(h) "Superfund Site" means any hazardous waste site designated for cleanup on the National Priorities List as mandated by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (P.L. 96-510), as amended;<sup>2</sup>

(i) "State Remedial Action Priority List" means a list compiled by the Illinois Environmental Protection Agency which identifies sites that appear to present significant risk to the public health, welfare or environment.

<sup>1</sup> Paragraph 1003 of this chapter.

<sup>2</sup> 42 U.S.C.A. § 9601 et seq.

#### 984. Duties and responsibilities

§ 4. The Department, under the Environmental Toxicology Program, shall have the following duties and responsibilities:

(a) to respond to citizen inquiries and investigate complaints regarding public health concerns which may be related to environmental hazards;

(b) to provide an initial assessment of potential adverse health effects in a community to determine whether a comprehensive health study is warranted in cases where exposure to hazardous substances has occurred;

(c) to conduct a comprehensive health study, if warranted, in cooperation with the Illinois Environmental Protection Agency to assess the full relationship, if any, between observed health problems and possible exposure to hazardous substances in a given community;

(d) to make recommendations for long-term follow-up studies when appropriate;

(e) to provide prompt referrals to appropriate agencies for remedial actions;

(f) to recommend legislation or regulation, in cooperation with the Illinois Environmental Protection Agency to the General Assembly or the Pollution Control Board.

#### 985. Assessment—Superfund or State Remedial Action Priority List Sites—Health study

§ 5. (a) Upon request by the Illinois Environmental Protection Agency, the Department shall conduct an initial assessment for any location designated as a Superfund Site or on the State Remedial Action Priority List. Such assessment shall be initiated within 60 days of the request.

(b) For sites designated as Superfund Sites or sites on the State Remedial Action Priority List on the effective date of this Act, the Department and the Illinois Environmental Protection Agency shall jointly determine which sites warrant initial assessment. If warranted, initial assessment shall be initiated by January 1, 1986.

(c) If, as a result of the initial assessment, the Department determines that a public health problem related to exposure to hazardous substances may exist in a community located near a designated site, the Department shall conduct a comprehensive health study to assess the full relationship, if any, between such threat or potential threat and possible exposure to hazardous substances at the designated site.

#### 986. Public health implications

§ 6. At the request of a unit of local government to which a siting approval application for a new regional pollution control facility for the storage, treatment or disposal of hazardous waste has been made, pursuant to Section 39.2 of the Environment Protection Act,<sup>1</sup> the Department shall evaluate the public health implications of such proposed facility.

Such request shall be made to the Department within 14 days of the filing of the application. The Department shall transmit its evaluation to the unit of local government within 75 days of the request. Such evaluation shall be made available for public inspection and shall be made part of the hearing record. If the Department fails to transmit the evaluation prior to the last required public hearing the unit of local government may consider that evaluation in making its determination only upon its finding that the delay has not resulted in material prejudice to the applicant or the public.

<sup>1</sup> Paragraph 1039.2 of this chapter.

#### 987. Power to contract

§ 7. The Department may enter into contracts or agreements with individuals, corporations, hospitals, universities, not-for-profit corporations, governmental entities or other organizations whereby such individuals, organizations or agencies agree to provide assistance to the Department in carrying out its duties and responsibilities under this Act.

#### 988. Application

§ 8. This Act shall not apply to employee complaints lodged against their employer, which fall under the provisions of the federal Occupational Safety and Health Act.<sup>1</sup>

<sup>1</sup> 29 U.S.C.A. § 651 et seq.

#### ENVIRONMENTAL PROTECTION ACT

AN ACT to protect the environment of the State and to repeal certain Acts therein named. P.A. 76-2429, approved June 29, 1970, eff. July 1, 1970.



## TITLE I: GENERAL PROVISIONS

## 1001. Short title and citation

§ 1. This Act shall be known and may be cited as the "Environmental Protection Act".

## 1002. Legislative declaration

§ 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.<sup>1</sup>

Amended by P.A. 83-1101, § 1, eff. Jan. 5, 1984.

<sup>1</sup> Chapter 38, § 1-1 et seq.

## 1003. Definitions

§ 3. For the purposes of this Act, the words and terms defined in the Sections which follow this Section and

precede Section 4<sup>1</sup> shall have the meaning therein given, unless the context otherwise clearly requires.

Amended by P.A. 84-1438, Art. II, § 36, eff. Dec. 22, 1986.

<sup>1</sup> Paragraph 1004 of this chapter.

Article II of P.A. 84-1438 was the Second 84th General Assembly Combining Revisory Act which resolved multiple actions and made technical corrections in Acts of the 84th General Assembly.

## 1003.01. Agency

§ 3.01. "Agency" is the Environmental Protection Agency established by this Act.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

## 1003.02. Air pollution

§ 3.02. "Air pollution" is the presence in the atmosphere of one or more contaminants in sufficient quantities and of such characteristics and duration as to be injurious to human, plant, or animal life, to health, or to property, or to unreasonably interfere with the enjoyment of life or property.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

## 1003.03. Air pollution control equipment

§ 3.03. "Air pollution control equipment" means any equipment or facility of a type intended to eliminate, prevent, reduce or control the emission of specified air contaminants to the atmosphere. Air pollution control equipment includes, but is not limited to, landfill gas recovery facilities.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

## 1003.04. Board

§ 3.04. "Board" is the Pollution Control Board established by this Act.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

## 1003.05. Community water supply—Non-community water supply

§ 3.05. "Community water supply" means a public water supply which serves or is intended to serve at least 15 service connections used by residents or regularly serves at least 25 residents.

"Non-community water supply" means a public water supply that is not a community water supply. The requirements of this Act shall not apply to non-community water supplies.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

## 1003.06. Contaminant

§ 3.06. "Contaminant" is any solid, liquid, or gaseous matter, any odor, or any form of energy, from whatever source.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

## 1003.07. Department

§ 3.07. "Department" is the Illinois Department of Energy and Natural Resources.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

## 1003.08. Disposal

§ 3.08. "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking or placing of any waste or

**1003.19. Landfill gas recovery facility**

§ 3.19. "Landfill gas recovery facility" means any facility which recovers and processes landfill gas from a sanitary landfill or waste disposal site.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

**1003.20. Landscape waste**

§ 3.20. "Landscape waste" means all accumulations of grass or shrubbery cuttings, leaves, tree limbs and other materials accumulated as the result of the care of lawns, shrubbery, vines and trees.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

**1003.21. Municipal waste**

§ 3.21. "Municipal waste" means garbage, general household and commercial waste, landscape waste and construction or demolition debris.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

**1003.22. Municipality**

§ 3.22. "Municipality" means any city, village or incorporated town.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

**1003.23. Open burning**

§ 3.23. "Open burning" is the combustion of any matter in the open or in an open dump.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

**1003.24. Open dumping**

§ 3.24. "Open dumping" means the consolidation of refuse from one or more sources at a disposal site that does not fulfill the requirements of a sanitary landfill.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

**1003.25. Organized amateur or professional sporting activity**

§ 3.25. "Organized amateur or professional sporting activity" means an activity or event carried out at a facility by persons who engaged in that activity as a business or for education, charity or entertainment for the general public, including all necessary actions and activities associated with such an activity. This definition includes, but is not limited to, skeet, trap or shooting sports clubs in existence prior to January 1, 1975, organized motor sports, and sporting events organized or controlled by school districts, units of local government, state agencies, colleges, universities or professional sports clubs offering exhibitions to the public.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

**1003.26. Person**

§ 3.26. "Person" is any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, political subdivision, state agency, or any other legal entity, or their legal representative, agent or assigns.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

**1003.27. Pollution control waste**

§ 3.27. "Pollution control waste" means any liquid, solid, semi-solid or gaseous waste generated as a direct or

indirect result of the removal of contaminants from the air, water or land, and which pose a present or potential threat to human health or to the environment or with inherent properties which make the disposal of such waste in a landfill difficult to manage by normal means. "Pollution Control Waste" includes but is not limited to water and wastewater treatment plant sludges, baghouse dusts, landfill waste, scrubber sludges and chemical spill cleanings.

Amended by P.A. 85-1428, § 1, eff. Jan. 5, 1989.

**1003.28. Public water supply**

§ 3.28. "Public water supply" means all mains, pipes and structures through which water is obtained and distributed to the public, including wells and well structures, intakes and cribs, pumping stations, treatment plants, reservoirs, storage tanks and appurtenances, collectively or severally, actually used or intended for use for the purpose of furnishing water for drinking or general domestic use and which serve at least 15 service connections or which regularly serve at least 25 persons at least 60 days per year. A public water supply is either a "community water supply" or a "non-community water supply".

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

**1003.29. RCRA permit**

§ 3.29. "RCRA permit" means a permit issued by the Agency pursuant to authorization received by the Agency from the United States Environmental Protection Agency under Subtitle C of the Resource Conservation and Recovery Act of 1976, (P.L. 94-580) (RCRA)<sup>1</sup> and which meets the requirements of Section 3005 of RCRA and of this Act.<sup>2</sup>

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

<sup>1</sup> 42 U.S.C.A. § 6921 et seq.

<sup>2</sup> 42 U.S.C.A. § 6925.

**1003.30. Recycling, reclamation or reuse**

§ 3.30. "Recycling, reclamation or reuse" when used in connection with hazardous waste means a method, technique, or process designed to remove any contaminant from waste so as to render such waste reusable.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

**1003.31. Refuse**

§ 3.31. "Refuse" means waste.

Added by P.A. 84-1308, Art. III, § 54, eff. Aug. 25, 1986.

**1003.32. Regional pollution control facility**

§ 3.32. (a) "Regional pollution control facility" is any waste storage site, sanitary landfill, waste disposal site, waste transfer station, waste treatment facility or waste incinerator that accepts waste from or that serves an area that exceeds or extends over the boundaries of any local general purpose unit of government. This includes sewers, sewage treatment plants, and any other facilities owned or operated by sanitary districts organized under "An Act to create sanitary districts and to remove obstructions in the Des Plaines and Illinois rivers", approved May 29, 1889, as now or hereafter amended.<sup>1</sup>

The following are not regional pollution control facilities:

clinging symbol and the following statements: "DO NOT put motor vehicle batteries in the trash."; "Recycle your used batteries."; and "State law requires us to accept motor vehicle batteries for recycling, in exchange for new batteries purchased."

(b) Any person selling lead-acid batteries at retail in this State may either charge a recycling fee on each new lead-acid battery sold for which the customer does not return a used battery to the retailer, or provide a recycling credit to each customer who returns a used battery for recycling at the time of purchasing a new one.

(c) Beginning September 1, 1990, no lead-acid battery retailer may dispose of a used lead-acid battery except by delivering it (1) to a battery wholesaler or its agent, (2) to a battery manufacturer, (3) to a collection or recycling facility, or (4) to a secondary lead smelter permitted by either a state or federal environmental agency.

(d) Any person selling lead-acid batteries at wholesale or offering lead-acid batteries for sale at wholesale shall accept for recycling used lead-acid batteries from customers, at the point of transfer, in a quantity equal to the number of new batteries purchased. Such used batteries shall be disposed of as provided in subsection (c).

(e) A person who accepts used lead-acid batteries for recycling pursuant to subsection (a) or (d) shall not allow such batteries to accumulate for periods of more than 90 days.

(f) Beginning September 1, 1990, no person may knowingly cause or allow:

(1) the placing of a lead-acid battery into any container intended for collection and disposal at a municipal waste sanitary landfill; or

(2) the disposal of any lead-acid battery in any municipal waste sanitary landfill or incinerator.

(g) The Department shall identify and assist in developing alternative processing and recycling options for used batteries.

(h) For the purpose of this Section:

"Lead-acid battery" means a battery containing lead and sulfuric acid that has a nominal voltage of at least 6 volts and is intended for use in motor vehicles.

"Motor vehicle" includes automobiles, vans, trucks, tractors, motorcycles and motorboats.

(i) The Department shall study the problems associated with household batteries that are processed or disposed of as part of mixed solid waste, and shall develop and implement a pilot project to collect and recycle used household batteries. The Department shall report its findings to the Governor and the General Assembly, together with any recommendations for legislation, by November 1, 1991.

(j) Knowing violation of this Section shall be a petty offense punishable by a fine of \$100.

Added by P.A. 86-723, § 1, eff. Jan. 1, 1990.

Other §§ 1022.23 were renumbered §§ 1022.24 and 1022.25.

#### 1022.24. Cleaning mud, gravel, waste, etc., from vehicles leaving landfills

§ 22.24. (a) Beginning January 1, 1990, no person may operate any landfill in any county with a population over 275,000, as determined by the latest federal decennial census, unless facilities are provided at such landfills which are appropriate for cleaning mud, gravel, waste and

other material from the site off of the wheels and undercarriages of trucks and other vehicles exiting the site.

(b) Beginning January 1, 1990, no person may drive any truck or trailer off the site of a landfill in any county with a population over 275,000, as determined by the latest federal decennial census, without first cleaning any mud, gravel, waste or other material from the site off of the wheels and undercarriage of the vehicle.

Formerly § 22.23. Added by P.A. 86-772, § 1, eff. Jan. 1, 1990. Renumbered § 22.24 and amended by P.A. 86-1028, Art. II, § 2-61, eff. Feb. 5, 1990.

P.A. 86-1028, Art. II, resolved multiple actions in the 86th General Assembly and made certain technical corrections in P.A. 86-1 through P.A. 86-1009.

#### 1022.25. Solid waste technicians—Training and certification—Supervision of sanitary landfill

*Paragraph effective July 1, 1990.*

§ 22.25. (a) The Agency shall annually conduct a course of training on the practical aspects of the design, operation and maintenance of solid waste disposal facilities, and shall designate as certified solid waste technicians all persons who successfully complete such training and meet such other qualifications as the Agency may require.

(b) Beginning January 1, 1991, the operation of each sanitary landfill accepting municipal waste in the State shall be subject to the supervision of a certified solid waste technician, and operation of such a sanitary landfill without the supervision of a certified solid waste technician shall be a violation of this Act.

(c) Nothing in this Section shall be construed as limiting the general authority of the Board to promulgate regulations pursuant to Title VII of this Act.<sup>1</sup>

Formerly § 22.23. Added by P.A. 86-961, § 1, eff. July 1, 1990. Renumbered § 22.25 and amended by P.A. 86-1028, Art. II, § 2-61, eff. Feb. 5, 1990.

<sup>1</sup> Paragraph 1026 et seq. of this chapter.

P.A. 86-1028, Art. II, resolved multiple actions in the 86th General Assembly and made certain technical corrections in P.A. 86-1 through P.A. 86-1009.

#### TITLE VI: NOISE

##### 1023. Legislative declaration

§ 23. The General Assembly finds that excessive noise endangers physical and emotional health and well-being, interferes with legitimate business and recreational activities, increases construction costs, depresses property values, offends the senses, creates public nuisances, and in other respects reduces the quality of our environment.

It is the purpose of this Title to prevent noise which creates a public nuisance.

##### 1024. Acts prohibited

§ 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.

**1025. Regulations**

§ 25. The Board, pursuant to the procedures prescribed in Title VII of this Act,<sup>1</sup> 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 Illinois Department of Energy and Natural Resources 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,<sup>2</sup> 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,<sup>3</sup> "beyond the boundaries of his property" or "beyond the boundaries of the property of any person" includes personal property as well as real property.

Amended by P.A. 85-1209, Art. II, § 2-71, eff. Aug. 30, 1988.

<sup>1</sup> Paragraph 1026 et seq. of this chapter.

<sup>2</sup> Paragraph 1027 of this chapter.

<sup>3</sup> Paragraph 1024 of this chapter.

Article II of P.A. 85-1209, the First 85th General Assembly Combining Revisory Act, resolved multiple actions in the 85th General Assembly and made certain technical corrections through P.A. 85-1014.

**TITLE VI-A: ATOMIC RADIATION**

**1025a. § 25a.** Repealed by P.A. 81-1516, § 15, eff. Dec. 3, 1986.

**1025b. Nuclear plant construction—Environmental feasibility report—Regulations**

§ 25b. The Pollution Control Board shall promulgate regulations requiring any person, corporation or public

authority intending to construct a nuclear steam-generating facility or a nuclear fuel reprocessing plant to file with the Department of Nuclear Safety an environmental feasibility report which incorporates the data provided in the preliminary safety analysis required to be filed with the United States Nuclear Regulatory Commission. The Board shall have the power to adopt standards to protect the health, safety and welfare of the citizens of Illinois from the hazards of radiation to the extent that such powers are not preempted under the federal constitution. Added by P.A. 81-1516, Art. I, § 14, eff. Dec. 3, 1980.

**1025a-1. Decommissioning plan**

§ 25a-1. At least 60 days before beginning the decommissioning of any nuclear power plant located in this State, the owner or operator of the plant shall file, for information purposes only, a copy of the decommissioning plan for the plant with the Agency and a copy with the Department of Nuclear Safety.

Added by P.A. 85-1400, § 1, eff. Sept. 12, 1988. Amended by P.A. 86-901, § 5, eff. Sept. 11, 1989.

**TITLE VI-B: TOXIC CHEMICAL REPORTING**

*Title VI-B, consisting of paragraphs 1025b-1 to 1025b-5, was added by P.A. 85-927, § 2, eff. July 1, 1988.*

**1025b-1. Legislative findings and purpose**

§ 25b-1. (a) The General Assembly finds:

(1) That many industrial facilities in the State may be emitting or discharging toxic chemicals into the environment on an ongoing basis, and that such releases may pose a chronic threat to public health and the environment.

(2) That members of the general public have a right to know about the toxic chemical emissions and discharges in their communities so that they can determine the implications on public health from exposure to such chemicals and participate in public policy decision-making.

(3) That the federal Emergency Planning and Community Right-to-Know Act of 1986<sup>1</sup> that has been recently enacted will require certain industries to provide information to the State on the types and quantities of toxic chemicals released into the air, ground and water.

(b) It is the purpose of this Title to provide for the coordinated State implementation of the new federal program which requires the disclosure of information about routine releases of toxic chemicals into the environment, and to provide an orderly procedure whereby the public may gain access to this information.

Added by P.A. 85-927, § 2, eff. July 1, 1988.

<sup>1</sup> 42 U.S.C.A. § 11001 et seq.

**1025b-2. Toxic chemical release forms**

§ 25b-2. (a) Facilities which are required to file toxic chemical release forms with the State pursuant to Section 313 of the federal Emergency Planning and Community Right-to-Know Act of 1986<sup>1</sup> shall file such forms with the Illinois Environmental Protection Agency.

(b) The Agency shall make toxic chemical release forms available to the public for inspection and copying during regular business hours and, upon written request, shall

body of the municipality. At such hearing the rules prescribed in Sections 32 and 33(a) of this Act<sup>3</sup> shall apply, and the burden of proof shall be on the petitioner; however, no new or additional evidence in support of or in opposition to any finding, order, determination or decision of the appropriate county board or governing body of the municipality shall be heard by the Board. In making its orders and determinations under this Section, the Board shall include in its consideration the written decision and reasons for the decision of the county board or the governing body of the municipality, the transcribed record of the hearing held pursuant to subsection (d) of Section 39.2, and the fundamental fairness of the procedures used by the county board or the governing body of the municipality in reaching its decision. The Board shall transmit a copy of its decision to the office of the county board or governing body of the municipality where it shall be available for public inspection and copied upon payment of the actual cost of reproduction. If there is no final action by the Board within 120 days, petitioner may deem the site location approved; provided, however that that period of 120 days shall not run for any period of time, not to exceed 30 days, during which the Board is without sufficient membership to constitute the quorum required by subsection (a) of Section 5 of this Act,<sup>4</sup> and provided further, that such 120 day period shall not be stayed for lack of quorum beyond 30 days regardless of whether the lack of quorum exists at the beginning of such 120 day period or occurs during the running of such 120 day period.

(b) If the county board or the governing body of the municipality as determined by paragraph (c) of Section 39 of this Act, grants approval under Section 39.2 of this Act, a third party other than the applicant who participated in the public hearing conducted by the county board or governing body of the municipality may petition the Board within 35 days for a hearing to contest the approval of the county board or the governing body of the municipality. Unless the Board determines that such petition is duplicitous or frivolous, or that the petitioner is so located as to not be affected by the proposed facility, the Board shall hear the petition in accordance with the terms of subsection (a) of this Section and its procedural rules governing denial appeals, such hearing to be based exclusively on the record before county board or the governing body of the municipality. The burden of proof shall be on the petitioner. The county board or the governing body of the municipality and the applicant shall be named as co-respondents.

The Board shall transmit a copy of its decision to the office of the county board or governing body of the municipality where it shall be available for public inspection and may be copied upon payment of the actual cost of reproduction.

(c) Any person who files a petition to contest a decision of the county board or governing body of the municipality shall pay a filing fee.

Amended by P.A. 85-1331, § 1, eff. Jan. 1, 1989.

<sup>1</sup> Paragraph 1039 of this chapter.

<sup>2</sup> Paragraph 1039.2 of this chapter.

<sup>3</sup> Paragraphs 1032 and 1033 of this chapter.

<sup>4</sup> Paragraph 1006 of this chapter.

P.A. 84-832, the 1985 Revisory Act, resolved multiple actions in the 83rd General Assembly.

#### TITLE XI: JUDICIAL REVIEW

##### 1041. Review under Administrative Review Law

§ 41. (a) Any party to a Board hearing, any person who filed a complaint on which a hearing was denied, any person who has been denied a variance or permit under this Act, and any party adversely affected by a final order or determination of the Board may obtain judicial review, by filing a petition for review within thirty-five days after entry of the order or other final action complained of, pursuant to the provisions of the Administrative Review Law, as amended and the rules adopted pursuant thereto,<sup>1</sup> except that review shall be afforded directly in the Appellate Court for the District in which the cause of action arose and not in the Circuit Court. Review of any rule or regulation promulgated by the Board shall not be limited by this section but may also be had as provided in Section 29 of this Act.<sup>2</sup>

(b) Any final order of the Board under this Act shall be based solely on the evidence in the record of the particular proceeding involved, and any such final order for permit appeals, enforcement actions and variance proceedings, shall be invalid if it is against the manifest weight of the evidence. Notwithstanding this subsection, the Board may include such conditions in granting a variance and may adopt such rules and regulations as the policies of this Act may require. If an objection is made to a variance condition, the Board shall reconsider the condition within not more than 75 days from the date of the objection.

(c) No challenge to the validity of a Board order shall be made in any enforcement proceeding under Title XII of this Act<sup>3</sup> as to any issue that could have been raised in a timely petition for review under this Section.

(d) If there is no final action by the Board within 120 days on a request for a variance which is subject to subsection (c) of Section 38<sup>4</sup> or a permit appeal which is subject to paragraph (a)(3) of Section 40<sup>5</sup> the petitioner shall be entitled to an Appellate Court order pursuant to this subsection. If a hearing is required under this Act and was not held by the Board, the Appellate Court shall order the Board to conduct such a hearing, and to make a decision within 90 days from the date of the order. If a hearing was held by the Board, or if a hearing is not required under this Act and was not held by the Board, the Appellate Court shall order the Board to make a decision within 90 days from the date of the order.

The Appellate Court shall retain jurisdiction during the pendency of any further action conducted by the Board pursuant to an order by the Appellate Court. The Appellate Court shall have jurisdiction to review all issues of law and fact presented upon appeal.

Amended by P.A. 83-431, § 1, eff. Sept. 17, 1983.

<sup>1</sup> Chapter 110, § 3-101 et seq.

<sup>2</sup> Paragraph 1029 of this chapter.

<sup>3</sup> Paragraph 1042 et seq. of this chapter.

<sup>4</sup> Paragraph 1038 of this chapter.

<sup>5</sup> Paragraph 1040 of this chapter.

#### TITLE XII: PENALTIES

1042. Violation of Act, regulation, permit, determination or order—Civil penalties—Liability for value of fish or aquatic life destroyed—Civil actions—Actions by State's Attorney or Attorney General

*Text of paragraph as amended by P.A. 86-242, § 1.*

§ 42. (a) Except as provided in this Section, any person that violates any provisions of this Act or any regulation adopted by the Board, or any permit or term or condition thereof, or that violates any determination or order of the Board pursuant to this Act, shall be liable to a civil penalty of not to exceed \$10,000 for said violation and an additional civil penalty of not to exceed \$1,000 for each day during which violation continues; such penalties may, upon order of the Board or a court of competent jurisdiction, be made payable to the Environmental Protection Trust Fund, to be used in accordance with the provisions of "An Act creating the Environmental Protection Trust Fund", approved September 22, 1979, as amended.<sup>1</sup>

(b) Notwithstanding the provisions of subsection (a) of this Section:

(1) Any person that violates Section 12(f) of this Act<sup>2</sup> or any NPDES permit or term or condition thereof, or any filing requirement, regulation or order relating to the NPDES permit program shall be liable to a civil penalty of not to exceed \$10,000 per day of violation;

(2) Any person that violates Section 12(g) of this Act or any UIC permit or term or condition thereof, or any filing requirement, regulation or order relating to the State UIC program for all wells, except Class II wells as defined by the Board under this Act, shall be liable to a civil penalty not to exceed \$2,500 per day of violation; provided, however, that any person who commits such violations relating to the State UIC program for Class II wells, as defined by the Board under this Act, shall be liable to a civil penalty of not to exceed \$10,000 for said violation and an additional civil penalty of not to exceed \$1,000 for each day during which the violation continues;

(3) Any person that violates Sections 21(f), 21(g), 21(h) or 21(i) of this Act<sup>3</sup> or any RCRA permit or term or condition thereof, or any filing requirement, regulation or order relating to the State RCRA program shall be liable to a civil penalty of not to exceed \$25,000 per day of violation.

(4) In an administrative citation action under Section 31.1 of this Act,<sup>4</sup> any person found to have violated any provision of subsection (p) or (q) of Section 21 of this Act shall pay a civil penalty of \$500 for each violation of each such provision, plus any hearing costs incurred by the Board and the Agency. Such penalties shall be made payable to the Environmental Protection Trust Fund, to be used in accordance with the provisions of "An Act creating the Environmental Protection Trust Fund", approved September 22, 1979, as amended; except that if a unit of local government issued the administrative citation, 50% of the civil penalty shall be payable to the unit of local government.

(c) Any person that violates this Act, or an order or other determination of the Board under this Act and causes the death of fish or aquatic life shall, in addition to the other penalties provided by this Act, be liable to pay to the State an additional sum for the reasonable value of the fish or aquatic life destroyed. Any money so recovered shall be placed in the Wildlife and Fish Fund in the State Treasury;

(d) The penalties provided for in this Section may be recovered in a civil action.

(e) The State's Attorney of the county in which the violation occurred, or the Attorney General, may, at the request of the Agency or on his own motion, institute a

civil action for an injunction to restrain violations of this Act.

(f) The State's Attorney of the county in which the violation occurred, or the Attorney General, shall bring such actions in the name of the people of the State of Illinois. Without limiting any other authority which may exist for the awarding of attorney's fees and costs, the Board or a court of competent jurisdiction may award costs and reasonable attorney's fees, including the reasonable costs of expert witnesses and consultants, to the State's Attorney or the Attorney General in a case where he has prevailed against a person who has committed a wilful, knowing or repeated violation of the Act.

Any funds collected under this subsection (f) in which the Attorney General has prevailed shall be deposited in the Hazardous Waste Fund created in Section 22.2 of this Act.<sup>5</sup> Any funds collected under this subsection (f) in which a State's Attorney has prevailed shall be retained by the county in which he serves.

(g) All final orders imposing civil penalties pursuant to this Section shall prescribe the time for payment of such penalties. If any such penalty is not paid within the time prescribed, interest on such penalty at the rate set forth in subsection (a) of Section 1003 of the Illinois Income Tax Act, as now or hereafter amended,<sup>6</sup> shall be paid for the period from the date payment is due until the date payment is received. However, if the time for payment is stayed during the pendency of an appeal, interest shall not accrue during such stay.

Amended by P.A. 85-1346, § 2, eff. Aug. 31, 1988; P.A. 86-242, § 1, eff. Jan. 1, 1990.

<sup>1</sup> Paragraph 1061 et seq. of this chapter.

<sup>2</sup> Paragraph 1012 of this chapter.

<sup>3</sup> Paragraph 1021 of this chapter.

<sup>4</sup> Paragraph 1031.1 of this chapter.

<sup>5</sup> Paragraph 1022.2 of this chapter.

<sup>6</sup> Chapter 120, ¶ 10-1003.

*For text of paragraph as amended by P.A. 86-242, § 1; P.A. 86-1014, § 1, eff. July 1, 1990, see ¶ 1042, post.*

*For final legislative action, see note following ¶ 1042, post.*

**1042. Violation of Act, regulation, permit, determination or order—Civil penalties—Liability for value of fish or aquatic life destroyed—Civil actions—Actions by State's Attorney or Attorney General**

*Text of paragraph as amended by P.A. 86-242, § 1; P.A. 86-1014, § 1, eff. July 1, 1990.*

§ 42. (a) Except as provided in this Section, any person that violates any provisions of this Act or any regulation adopted by the Board, or any permit or term or condition thereof, or that violates any determination or order of the Board pursuant to this Act, shall be liable to a civil penalty of not to exceed \$50,000 for said violation and an additional civil penalty of not to exceed \$10,000 for each day during which violation continues; such penalties may, upon order of the Board or a court of competent jurisdiction, be made payable to the Environmental Protection Trust Fund, to be used in accordance with the provisions of "An Act creating the Environmental Protection Trust Fund", approved September 22, 1979, as amended.<sup>1</sup>

(c) If an industrial user of a publicly owned or publicly regulated sewage works is not in compliance with a system of user charges required under State law or local ordinance or regulations or as a term or condition of any NPDES permit issued under this Act to the sewage works into which the user is discharging contaminants, the system of charges may be enforced directly against the industrial user—

(i) by the public body owning or regulating such sewage works, pursuant to State law or local ordinance; or

(ii) under the provisions of Title VIII of this Act;<sup>1</sup> or

(iii) the State's Attorney of the county in which the violation occurred, or the Attorney General, at the request of the Agency or on his own motion, may proceed in a court of competent jurisdiction to secure such relief.

Amended P.A. 78-862, § 1, eff. Sept. 14, 1973.

<sup>1</sup> Paragraph 1030 et seq. of this chapter.

**1044. Violations of Act, regulations or permits—Offenses—Punishment—Venue—Procedure**

§ 44. (a) Except as otherwise provided in this Section, it shall be a Class A misdemeanor to violate this Act or regulations thereunder, or any permit or term or condition thereof, or knowingly to submit any false information under this Act or regulations adopted thereunder, or under any permit or term or condition thereof. It shall be the duty of all State and local law-enforcement officers to enforce such Act and regulations, and all such officers shall have authority to issue citations for such violations.

**(b) Calculated Criminal Disposal of Hazardous Waste.**

(1) A person commits the offense of Calculated Criminal Disposal of Hazardous Waste when, without lawful justification, he knowingly disposes of hazardous waste while knowing that he thereby places another person in danger of great bodily harm or creates an immediate or long-term danger to the public health or the environment.

(2) Calculated Criminal Disposal of Hazardous Waste is a Class 2 felony. In addition to any other penalties prescribed by law, a person convicted of the offense of Calculated Criminal Disposal of Hazardous Waste is subject to a fine not to exceed \$500,000 for each day of such offense.

**(c) Criminal Disposal of Hazardous Waste.**

(1) A person commits the offense of Criminal Disposal of Hazardous Waste when, without lawful justification, he knowingly disposes of hazardous waste.

(2) Criminal Disposal of Hazardous Waste is a Class 3 felony. In addition to any other penalties prescribed by law, a person convicted of the offense of Criminal Disposal of Hazardous Waste is subject to a fine not to exceed \$250,000 for each day of such offense.

**(d) Unauthorized Use of Hazardous Waste.**

(1) A person commits the offense of Unauthorized Use of Hazardous Waste when he, being required to have a permit or license under this Act or any other law regulating the treatment, transportation, or storage of hazardous waste, knowingly:

(A) treats, transports, or stores any hazardous waste without such permit or license; or

(B) treats, transports, or stores any hazardous waste in violation of the terms and conditions of such permit or license; or

(C) transports any hazardous waste to a facility which does not have a permit or license required under this Act; or

(D) transports any hazardous waste without having on his person such permit or license.

(2) A person who is convicted of a violation of subdivision (1)(A), (1)(B) or (1)(C) of this subsection is guilty of a Class 4 felony. A person who is convicted of a violation of subdivision (1)(D) is guilty of a Class A misdemeanor. In addition to any other penalties prescribed by law, a person convicted of violating subdivision (1)(A), (1)(B) or (1)(C) is subject to a fine not to exceed \$100,000 for each day of such violation, and a person who is convicted of violating subdivision (1)(D) is subject to a fine not to exceed \$1,000.

**(e) Unlawful Delivery of Hazardous Waste.**

(1) Except as authorized by this Act or the federal Resource Conservation and Recovery Act,<sup>1</sup> and the regulations promulgated thereunder, it is unlawful for any person to knowingly deliver hazardous waste.

(2) Unlawful Delivery of Hazardous Waste is a Class 3 felony. In addition to any other penalties prescribed by law, a person convicted of the offense of Unlawful Delivery of Hazardous Waste is subject to a fine not to exceed \$250,000 for each such violation.

(3) For purposes of this Section, "deliver" or "delivery" means the actual, constructive, or attempted transfer of possession of hazardous waste, with or without consideration, whether or not there is an agency relationship.

**(f) Reckless Disposal of Hazardous Waste.**

(1) A person commits Reckless Disposal of Hazardous Waste if he disposes of hazardous waste, and his acts which cause the hazardous waste to be disposed of, whether or not those acts are undertaken pursuant to or under color of any permit or license, are performed with a conscious disregard of a substantial and justifiable risk that such disposing of hazardous waste is a gross deviation from the standard of care which a reasonable person would exercise in the situation.

(2) Reckless Disposal of Hazardous Waste is a Class 4 felony. In addition to any other penalties prescribed by law, a person convicted of the offense of Reckless Disposal of Hazardous Waste is subject to a fine not to exceed \$50,000 for each day of such offense.

**(g) Concealment of Criminal Disposal of Hazardous Waste.**

(1) A person commits the offense of Concealment of Criminal Disposal of Hazardous Waste when he conceals, without lawful justification, the disposal of hazardous waste with the knowledge that such hazardous waste has been disposed of in violation of this Act.

(2) Concealment of Criminal Disposal of a Hazardous Waste is a Class 4 felony. In addition to any other penalties prescribed by law, a person convicted of the offense of Concealment of Criminal Disposal of Hazardous Waste is subject to a fine not to exceed \$50,000 for each day of such offense.

**(h) Violations—False Statements.**

(1) Any person who knowingly makes a false material statement in an application for a permit or license required by this Act to treat, transport, store, or dispose of hazardous waste commits the offense of Perjury and shall be subject to the penalties set forth in Section 32-2 of the Criminal Code of 1961, as now or hereafter amended.<sup>2</sup>



(2) No conveyance is subject to forfeiture under this Section by reason of any covered violation which the owner proves to have been committed without his knowledge or consent.

(3) A forfeiture of a conveyance encumbered by a bona fide security interest is subject to the interest of the secured party if he neither had knowledge of nor consented to the covered violation.

(c) Except as provided in subsection (d), all property subject to forfeiture under this Section shall be seized pursuant to the order of a circuit court.

(d) Property subject to forfeiture under this Section may be seized by the Director or any peace officer without process:

(1) if the seizure is incident to an inspection under an administrative inspection warrant, or incident to the execution of a criminal search or arrest warrant;

(2) if the property subject to seizure has been the subject of a prior judgment in favor of the State in a criminal proceeding, or in an injunction or forfeiture proceeding based upon this Act; or

(3) if there is probable cause to believe that the property is directly or indirectly dangerous to health or safety.

(e) Property taken or detained under this Section shall not be subject to forcible entry and detainer or replevin, but is deemed to be in the custody of the Director subject only to the order and judgments of the circuit court having jurisdiction over the forfeiture proceedings. When property is seized under this Act, the Director may:

(1) place the property under seal;

(2) secure the property or remove the property to a place designated by him; or

(3) require the sheriff of the county in which the seizure occurs to take custody of the property and secure or remove it to an appropriate location for disposition in accordance with law.

(f) All amounts forfeited under item (1) of subsection (a) shall be apportioned in the following manner:

(1) 40% shall be deposited in the Hazardous Waste Fund created in Section 22.2;<sup>1</sup>

(2) 30% shall be paid to the office of the Attorney General or the State's Attorney of the county in which the violation occurred, whichever brought and prosecuted the action; and

(3) 30% shall be paid to the law enforcement agency which investigated the violation.

Any funds received under this subsection (f) shall be used solely for the enforcement of the environmental protection laws of this State.

(g) When property is forfeited under this Section the court may order:

(1) that the property shall be made available for the official use of the Agency, the Office of the Attorney General, the State's Attorney of the county in which the violation occurred, or the law enforcement agency which investigated the violation, to be used solely for the enforcement of the environmental protection laws of this State;

(2) the sheriff of the county in which the forfeiture occurs to take custody of the property and remove it for disposition in accordance with law; or

(3) the sheriff of the county in which the forfeiture occurs to sell that which is not required to be destroyed by

law and which is not harmful to the public. The proceeds of such sale shall be used for payment of all proper expenses of the proceedings for forfeiture and sale, including expenses of seizure, maintenance of custody, advertising and court costs, and the balance, if any, shall be apportioned pursuant to subsection (f).

Added by P.A. 85-487, § 1, eff. Jan. 1, 1988.

<sup>1</sup> Paragraph 1022.2 of this chapter.

**1045. Civil and criminal remedies not impaired by Act—Construction with Conservation of Oil and Gas etc. Act—Actions by persons adversely affected—Costs and attorney's fees**

§ 45. (a) No existing civil or criminal remedy for any wrongful action shall be excluded or impaired by this Act. Nothing in this Act shall be construed to limit or supersede the provisions of "An Act in relation to oil, gas, coal and other surface and underground resources and to repeal an Act herein named", filed July 29, 1941, as amended,<sup>1</sup> and the powers therein granted to prevent the intrusion of water into oil, gas or coal strata and to prevent the pollution of fresh water supplies by oil, gas or salt water or oil field wastes, except that water quality standards as set forth by the Pollution Control Board apply to and are effective within the areas covered by and affected by permits issued by the Department of Mines and Minerals. Providing that if the Department of Mines and Minerals fails to act upon any complaint within a period of ten working days following the receipt of said complaint by the Department, the Environmental Protection Agency may proceed under the provisions of this Act.

(b) Any person adversely affected in fact by a violation of this Act or of regulations adopted thereunder may sue for injunctive relief against such violation. However, no action shall be brought under this Section until 30 days after the plaintiff has been denied relief by the Board under paragraph (b) of Section 31 of this Act.<sup>2</sup> The prevailing party shall be awarded costs and reasonable attorneys' fees.

(c) Nothing in Section 39.4 of this Act<sup>3</sup> shall limit the authority of the Agency to proceed with enforcement under the provisions of this Act for violations of terms and conditions of an endorsed agricultural facility permit or this Act or regulations hereunder caused or threatened by an agricultural facility, provided that prior notice is given to the Department of Agriculture which provides that Department an opportunity to respond as appropriate. Amended by P.A. 86-671, § 1, eff. Sept. 1, 1989.

<sup>1</sup> Chapter 96½, § 5401 et seq.

<sup>2</sup> Paragraph 1031 of this chapter.

<sup>3</sup> Paragraph 1039.4 of this chapter.

**TITLE XIII: MISCELLANEOUS PROVISIONS**

**1046. Public bodies—Abatement of violations—Cost of abatement—Funds—Bonds—Sanitary Fund—Eligibility for federal grants**

§ 46. (a) Any municipality, sanitary district, county or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, which has been directed by an order issued by the Board or by the circuit court to abate any violation of this Act or of any regulation adopted thereunder shall, unless such order be set aside upon review, take steps for the acquisition or construction of



such facilities, or for such repair, alteration, extension or completion of existing facilities, or for such modification of existing practices as may be necessary to comply with the order. The cost of the acquisition, construction, repair, alteration, completion, or extension of such facilities, or of such modification of practices shall be paid out of funds on hand available for such purposes, or out of the general funds of such public body not otherwise appropriated.

If funds on hand or unappropriated are insufficient for the purposes of this Section, the necessary funds shall be raised by the issuance of either general obligation or revenue bonds. If the estimated cost of the steps necessary to be taken by such public body to comply with such order is such that the bond issue, necessary to finance such project, would not raise the total outstanding bonded indebtedness of such public body in excess of any limit which may be imposed upon such indebtedness, the necessary bonds may be issued as a direct obligation of such public body and retired pursuant to general law governing the issue of such bonds. No election or referendum shall be necessary for the issuance of bonds under this Section.

The funds made available by the issuance of direct obligation or revenue bonds as herein provided shall constitute a Sanitary Fund, and shall be used for no other purpose than for carrying out such order or orders of the Board.

The Attorney General shall enforce this provision of the Act by an action for mandamus, injunction, or other appropriate relief.

(b) In order to be eligible for federal grants for construction of sewage works pursuant to Section 201(g) of the Federal Water Pollution Control Act, as now or hereafter amended,<sup>1</sup> any sanitary district, drainage district, municipality, county, special district or other unit of local government established pursuant to State law, that owns or operates sewage works may adopt, in accordance with such unit's statutory procedures, ordinances or regulations to provide for systems of proportionate cost sharing for operation and maintenance by recipients of such unit's waste treatment services, to provide for payments by industrial users of costs of sewage works construction allocable to the treatment of industrial wastes, and to provide such other capabilities as may be necessary to comply with Sections 204(b), 307, and 308 of the Federal Water Pollution Control Act, as now or hereafter amended.<sup>2</sup>

(c) In order to comply with Section 307 of the Federal Water Pollution Control Act, as now or hereafter amended, and regulations promulgated thereunder, the units of local government identified in subsection (b) of this Section may adopt, in accordance with such unit's statutory procedures, ordinances or regulations to enable the unit of government, as regards industrial users of sewage works, to control through permit, contract, order or similar means, the nature and amount of pollutants discharged to the sewage works, to require compliance with applicable pretreatment standards and requirements, to require compliance schedules and the submission of notices and self-monitoring reports related thereto, to carry out inspection and monitoring procedures in order to determine compliance or noncompliance with the applicable pretreatment standards and requirements, to obtain remedies including, but not limited to, injunctive relief and civil and criminal penalties for noncompliance with pretreatment standards and requirements, and to provide such other capabilities as may be necessary to comply with Section 307 of the

Federal Water Pollution Control Act, as now or hereafter amended, and regulations promulgated thereunder.

Amended by P.A. 86-671, § 1, eff. Sept. 1, 1989.

<sup>1</sup> 33 U.S.C.A. § 1281.

<sup>2</sup> 33 U.S.C.A. §§ 1284, 1317 and 1318.

#### 1047. State of Illinois—State agencies—Compliance with act and regulations

§ 47. (a) The State of Illinois and all its agencies, institutions, officers and subdivisions shall comply with all requirements, prohibitions, and other provisions of the Act and of regulations adopted thereunder.

(b) Each state agency or institution shall annually assess the environmental problems created by its operations and the extent to which its operations are in violation of this Act or of regulations adopted thereunder, and shall report to the Environmental Protection Agency on or before December 1 of each year as to the findings of such assessment, the progress made in eliminating such violations, and the steps to be taken in the future to assure compliance.

(c) Each state agency or institution shall submit to the Environmental Protection Agency complete plans, specifications and cost estimates for any proposed installation or facility that may cause a violation of this Act or of regulations adopted thereunder by December 1 of each year.

#### 1048. Licensing of vehicles, vessels or aircraft subject to regulations

§ 48. (a) Whenever the Board has adopted regulations respecting the equipment, specifications, use, inspection, or sale of vehicles, vessels, or aircraft, no department or agency shall license any such vehicles, vessels, or aircraft for operation in this State in the absence of such proof as the Board may prescribe that the equipment in question satisfies the Board's regulations.

(b) Whenever the Board has adopted regulations limiting vehicle, vessel, or aircraft operations to essential or other classes of use under certain conditions, the department or agency responsible for the licensing shall issue indicia of such use, subject to standards prescribed by the Board, for each vehicle, vessel, or aircraft qualifying therefor.

#### 1049. Transitional provisions—Compliance with rules and regulations as prima facie defense

§ 49. (a) Until the Board and the Agency established by this Act has been appointed and taken office, the functions assigned to the Board and to the Agency shall be performed by the members of the existing Air Pollution Control Board and Sanitary Water Board and by the Department of Public Health.

(b) All proceedings respecting acts done before the effective date of this Act shall be determined in accordance with the law and regulations in force at the time such acts occurred. All proceedings instituted for actions taken after the effective date of this Act shall be governed by this Act.

(c) All rules and regulations of the Air Pollution Control Board, the Sanitary Water Board, or the Department of Public Health relating to subjects embraced within this Act shall remain in full force and effect until repealed, amended, or superseded by regulations under this Act.



# ILLINOIS REVISED STATUTES 1989

STATE BAR ASSOCIATION EDITION

Containing  
The General and Permanent Laws of Illinois  
Through P.A. 86-1028 of the 86th General Assembly  
Convened January 11, 1989  
Adjourned July 1, 1989  
Reconvened October 4, 1989  
Adjourned sine die November 3, 1989

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Volume 2

Chapters 34 to 75  
Counties  
to  
Jails and Jailers

COMPILED AND EDITED  
UNDER  
SMITH-HURD CLASSIFICATION

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he finds the chief of police guilty of not properly protecting the prisoner, a new chief of police shall be appointed. Any chief of police replaced shall not be eligible to serve again in such office.

(b) If a prisoner is taken from the custody of any sheriff or his deputy and lynched, it shall be prima facie evidence of wrong-doing on the part of such sheriff and he shall be suspended. The governor shall appoint an acting sheriff until he has ascertained whether the suspended sheriff has done all in his power to protect the life of the prisoner. If, upon hearing all evidence and argument, the governor finds that the sheriff has done his utmost to protect the prisoner, he shall reinstate the sheriff; but, if he finds the sheriff guilty of not properly protecting the prisoner, a new sheriff shall be duly elected or appointed, pursuant to the existing law provided for the filling of vacancies in such office. Any sheriff replaced shall not be eligible to serve again in such office.

25-3. Repealed by Laws 1967, p. 2365, § 1, eff. July 31, 1967.

## ARTICLE 26. DISORDERLY CONDUCT

### Paragraph

- 26-1. Elements of the offense.
- 26-2. Interference with emergency communication.
- 26-3. Use of a facsimile machine in unsolicited advertising or fundraising.

### 26-1. Elements of the offense

§ 26-1. Elements of the Offense. (a) A person commits disorderly conduct when he knowingly:

(1) Does any act in such unreasonable manner as to alarm or disturb another and to provoke a breach of the peace; or

(2) Transmits in any manner to the fire department of any city, town, village or fire protection district a false alarm of fire, knowing at the time of such transmission that there is no reasonable ground for believing that such fire exists; or

(3) Transmits in any manner to another a false alarm to the effect that a bomb or other explosive of any nature is concealed in such place that its explosion would endanger human life, knowing at the time of such transmission that there is no reasonable ground for believing that such bomb or explosive is concealed in such place; or

(4) Transmits in any manner to any peace officer, public officer or public employee a report to the effect that an offense has been committed, knowing at the time of such transmission that there is no reasonable ground for believing that such an offense has been committed; or

(5) Enters upon the property of another and for a lewd or unlawful purpose deliberately looks into a dwelling on the property through any window or other opening in it; or

(6) While acting as a collection agency as defined in the "Collection Agency Act"<sup>1</sup> or as an employee of such collection agency, and while attempting to collect an alleged debt, makes a telephone call to the alleged debtor which is designed to harass, annoy or intimidate the alleged debtor; or

(7) Transmits a false report to the Department of Children and Family Services under Section 4 of the "Abused and Neglected Child Reporting Act";<sup>2</sup> or

(8) Transmits a false report to the Department of Public Health under the Nursing Home Care Act;<sup>3</sup> or

(9) Transmits in any manner to the police department or fire department of any municipality or fire protection district, or any privately owned and operated ambulance service, a false request for an ambulance, emergency medical technician-ambulance or emergency medical technician-paramedic knowing at the time there is no reasonable ground for believing that such assistance is required; or

(10) Transmits a false report under Article II of "An Act in relation to victims of violence and abuse", approved September 16, 1984, as amended.<sup>4</sup>

### (b) Sentence.

A violation of subsection (a)(1) of this Section is a Class C misdemeanor. A violation of subsection (a)(7) or (a)(9) of this Section is a Class A misdemeanor. A violation of subsection (a)(4), (a)(5), (a)(8) or (a)(10) of this Section is a Class B misdemeanor. A violation of subsection (a)(2) or (a)(3) of this Section is a Class 4 felony.

A violation of subsection (a)(6) of this Section is a Business Offense and shall be punished by a fine not to exceed \$3,000. A second or subsequent violation of (a)(7) of this Section is a Class 4 felony.

Amended by P.A. 86-407, § 1, eff. Aug. 30, 1989; P.A. 86-712, § 1, eff. Jan. 1, 1990; P.A. 86-820, Art. III, § 3-17, eff. Sept. 7, 1989; P.A. 86-835, § 2, eff. Jan. 1, 1990; P.A. 86-1028, Art. II, § 2-19, eff. Feb. 5, 1990.

<sup>1</sup> Chapter 111, § 2001 et seq.

<sup>2</sup> Chapter 23, § 2054.

<sup>3</sup> Chapter 111½, § 14151-101 et seq.

<sup>4</sup> Chapter 23, § 6501 et seq.

P.A. 86-1028, Art. II, resolved multiple actions in the 86th General Assembly and made certain technical corrections in P.A. 86-1 through P.A. 86-1009.

### 26-2. Interference with emergency communication

§ 26-2. Interference with Emergency Communication. (a) A person commits the offense of interference with emergency communication when he knowingly, intentionally and without lawful justification interrupts, disrupts, impedes, or otherwise interferes with the transmission of a communication over a citizens band radio channel, the purpose of which communication is to inform or inquire about an emergency.

(b) For the purpose of this Section, "emergency" means a condition or circumstance in which an individual is or is reasonably believed by the person transmitting the communication to be in imminent danger of serious bodily injury or in which property is or is reasonably believed by the person transmitting the communication to be in imminent danger of damage or destruction.

(c) Sentence. (1) Interference with emergency communication is a Class B misdemeanor, except as otherwise provided in paragraph (2).

(2) Interference with emergency communication, where serious bodily injury or property loss in excess of \$1,000 results, is a Class A misdemeanor.

Added by P.A. 82-418, § 1, eff. Jan. 1, 1982.

has completed the sentence imposed by the other state or district court of the United States.

Amended by P.A. 85-1209, Art. II, § 2-25, eff. Aug. 30, 1988; P.A. 85-1259, § 2, eff. Jan. 1, 1989; P.A. 85-1440, Art. II, § 2-54, eff. Feb. 1, 1989.

<sup>1</sup> Paragraph 9-1 of this chapter.

<sup>2</sup> Paragraph 33B-1 et seq. of this chapter.

<sup>3</sup> Paragraph 1005-4-1 of this chapter.

<sup>4</sup> Paragraph 1003-3-8 of this chapter.

Article II of P.A. 85-1209, the First 85th General Assembly Combining Revisory Act, resolved multiple actions in the 85th General Assembly and made certain technical corrections through P.A. 85-1014.

P.A. 85-1440, Art. II, § 2-54, indicated by reference the Public Act which may be relied on to contain the complete current text of paragraphs affected by multiple actions in P.A. 85-1015 through P.A. 85-1427.

1005-8-1A. § 5-8-1A. Repealed by P.A. 80-26, § 3, eff. June 21, 1977.

#### 1005-8-2. Extended term

§ 5-8-2. Extended Term. (a) A judge shall not sentence an offender to a term of imprisonment in excess of the maximum sentence authorized by Section 5-8-1<sup>1</sup> for the class of the most serious offense of which the offender was convicted unless the factors in aggravation set forth in paragraph (b) of Section 5-5-3.2<sup>2</sup> were found to be present. Where the judge finds that such factors were present, he may sentence an offender to the following:

(1) for first degree murder, a term shall be not less than 60 years and not more than 100 years;

(2) for a Class X felony, a term shall be not less than 30 years and not more than 60 years;

(3) for a Class 1 felony, a term shall be not less than 15 years and not more than 30 years;

(4) for a Class 2 felony, a term shall be not less than 7 years and not more than 14 years;

(5) for a Class 3 felony, a term shall not be less than 5 years and not more than 10 years;

(6) for a Class 4 felony, a term shall be not less than 3 years and not more than 6 years.

(b) If the conviction was by plea, it shall appear on the record that the plea was entered with the defendant's knowledge that a sentence under this Section was a possibility. If it does not so appear on the record, the defendant shall not be subject to such a sentence unless he is first given an opportunity to withdraw his plea without prejudice.

Amended by P.A. 85-902, § 1, eff. Jan. 1, 1988.

<sup>1</sup> Paragraph 1005-8-1 of this chapter.

<sup>2</sup> Paragraph 1005-5-3.2 of this chapter.

#### 1005-8-3. Sentence of imprisonment for misdemeanor

##### § 5-8-3. Sentence of Imprisonment for Misdemeanor.

(a) A sentence of imprisonment for a misdemeanor shall be for a determinate term according to the following limitations:

(1) for a Class A misdemeanor, for any term less than one year;

(2) for a Class B misdemeanor, for not more than 6 months;

(3) for a Class C misdemeanor, for not more than 30 days.

(b) The good behavioral allowance shall be determined under Section 3 of the Misdemeanant Good Behavior Allowance Act.<sup>1</sup>

Amended by P.A. 81-1050, § 6, eff. Sept. 24, 1979.

<sup>1</sup> Chapter 75, " 32.

#### 1005-8-4. Concurrent and consecutive terms of imprisonment

§ 5-8-4. Concurrent and Consecutive Terms of Imprisonment. (a) When multiple sentences of imprisonment are imposed on a defendant at the same time, or when a term of imprisonment is imposed on a defendant who is already subject to sentence in this State or in another state, or for a sentence imposed by any district court of the United States, the sentences shall run concurrently or consecutively as determined by the court. When a term of imprisonment is imposed on a defendant by an Illinois circuit court and the defendant is subsequently sentenced to a term of imprisonment by another state or by a district court of the United States, the Illinois circuit court which imposed the sentence may order that the Illinois sentence be made concurrent with the sentence imposed by the other state or district court of the United States. The defendant must apply to the circuit court within 30 days after the defendant's sentence imposed by the other state or district of the United States is finalized. The court shall not impose consecutive sentences for offenses which were committed as part of a single course of conduct during which there was no substantial change in the nature of the criminal objective, unless, one of the offenses for which defendant was convicted was a Class X or Class 1 felony and the defendant inflicted severe bodily injury, or where the defendant was convicted of a violation of Section 12-13 or 12-14 of the Criminal Code of 1961,<sup>1</sup> in which event the court shall enter sentences to run consecutively. Sentences shall run concurrently unless otherwise specified by the court.

(b) The court shall not impose a consecutive sentence except as provided for in subsection (a) unless, having regard to the nature and circumstances of the offense and the history and character of the defendant, it is of the opinion that such a term is required to protect the public from further criminal conduct by the defendant, the basis for which the court shall set forth in the record.

(c)(1) For sentences imposed under law in effect prior to February 1, 1978 the aggregate maximum of consecutive sentences shall not exceed the maximum term authorized under Section 5-8-1<sup>2</sup> for the 2 most serious felonies involved. The aggregate minimum period of consecutive sentences shall not exceed the highest minimum term authorized under Section 5-8-1 for the 2 most serious felonies involved. When sentenced only for misdemeanors, a defendant shall not be consecutively sentenced to more than the maximum for one Class A misdemeanor.

(2) For sentences imposed under the law in effect on or after February 1, 1978, the aggregate of consecutive sentences shall not exceed the sum of the maximum terms authorized under Section 5-8-2<sup>3</sup> for the 2 most serious felonies involved. When sentenced only for misdemeanors, a defendant shall not be consecutively sentenced to more than the maximum for one Class A misdemeanor.

(d) An offender serving a sentence for a misdemeanor who is convicted of a felony and sentenced to imprisonment shall be transferred to the Department of Correc-



Illinois Environmental Protection Agency

State of Illinois



Rules and Regulations

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**TITLE 35:  
ENVIRONMENTAL PROTECTION**

**SUBTITLE H:  
NOISE**

**CHAPTER I:  
POLLUTION CONTROL BOARD**

**May 1, 1984**





### ECONOMIC CONSIDERATIONS

Two economically-based arguments in opposition to the proposed amendments were reasserted in the public comments during the first notice period. These relate to the cost of replacing and/or adapting existing noise meters such that these can measure Leq, and added manpower needed to make noise measurements.

The Agency reasserted that the noise meters presently owned by the Agency, and presumably at least some of those owned by other entities who measure noise, are not equipped to measure Leq. Some confusion has existed throughout the record in this matter as to the costs which would be involved in adapting these meters to Leq measurement. The latest estimate is that the cost per meter would be approximately \$610 (PC #5, p. 14). The Board does not believe that this cost is prohibitive. Moreover, as existing meters require replacement, they would be expected to be replaced by Leq-capable meters anyway since these are the current standard of the industry. The Board also notes that the updated meters need be used only for enforcement, not for routine assessment.

The gathering of one-hour Leq data suitable for enforcement actions may, under some circumstances, require longer measurement times than required under the present rule. Thus, manpower needs may be larger. However, the Board believes that this is a small price to pay relative to the gains to be made with respect to strengthening the noise regulations both as to enforceability and compliance expectations.

### ORDER

The Board directs the Clerk to cause the following adopted final rules to be filed with the Secretary of State.

Title 35: Environmental Protection  
Subtitle H: Noise  
Chapter I: Pollution Control Board

#### Section 900.103 Measurement Procedures

- (a) No change
- (b) Procedures Applicable Only to 35 Ill. Adm. Code 901

All measurements and all Mmeasurement procedures to determine whether emissions of sound comply with 35 Ill. Adm. Code 901 shall be in substantial conformity with ANSI S1.6-1967, ANSI S1.4-1971 -- Type I Precision, ANSI S1.11-1966 and ANSI S1.13-1971 Field Method, and 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 of one

hour. All such measurements and measurement procedures shall correct or provide for the correction of such emissions for the presence of ambient noise as defined in ANSI S1.13-1971.

(c-e) No change

Section 901.104 IMPULSIVE SOUND

Except as elsewhere in this Part provided, no person shall cause or allow the emission of 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 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 such from property-line-noise-source.

IT IS SO ORDERED.

J. D. Dumelle and B. Forcade dissented.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Final Opinion and Order was adopted on the 3.2 day of January, 1987, by a vote of 4-2.

  
Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board

**State of Illinois**



**Rules and Regulations**

**TITLE 35:  
ENVIRONMENTAL PROTECTION**

**SUBTITLE H:  
NOISE**

**CHAPTER I:  
POLLUTION CONTROL BOARD**

**This printing of Title 35: Environmental Protection,  
Subtitle H: Noise, Chapter I: Pollution Control Board  
includes amendments through May 1, 1984.**



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## TITLE 35: ENVIRONMENTAL PROTECTION

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#### CHAPTER I: POLLUTION CONTROL BOARD

##### PART 900

##### GENERAL PROVISIONS

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##### Appendix A Old Rule Numbers Referenced

**AUTHORITY:** *Implementing Section 25 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1981, ch. 111 1/2, pars. 1025 and 1027).*

**SOURCE:** *Originally filed as Part 1 of Chapter 8: Noise Pollution, effective August 10, 1973; amended at 2 Ill. Reg. 27, p. 223, effective June 26, 1978; amended at 5 Ill. Reg. 6371, effective June 1, 1981; amended at 5 Ill. Reg. 8533, effective August 10, 1981; amended at 6 Ill. Reg. 10960, effective September 1, 1982; codified at 7 Ill. Reg. 13645.*

##### Section 900.101 Definitions

Except as hereinafter stated and unless a different meaning of a term is clear from its context, the definitions of terms used in this Chapter shall be the same as those used in the Environmental Protection Act. All definitions of acoustical terminology shall be in conformance with those contained in American National Standards Institute (ANSI) §1.1 - 1960 "Acoustical Terminology." As used in 35 Ill. Adm. Code 900 through 905, the following terms mean:

**A-Weighted Sound Level: dB(A)**, in decibels, a frequency weighted sound pressure level, determined by the use of the metering characteristics and A-weighted network specified in ANSI §1.4-1971 (R. 1976) "Specification for Sound Level Meters" and the latest revisions thereof.

**AHRA:** American Hot Rod Association or its successor body.

**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 Sound Level:** the A-weighted sound level, measured in accordance with the procedures specified in Section 900.103, which is exceeded 90 percent of the time during the period of observation, during which sounds from motor racing facilities are inaudible. The period of observation need not necessarily be contiguous; however, the period of observation must be at least of 10 minutes duration.

**Bus:** every motor vehicle designed for carrying more than 10 passengers and used for the transportation of persons; 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 document §1.4-1971 (R. 1976) "Specification for Sound Level Meters."

**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."

**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 ( $\mu\text{N/m}^2$ ).

**Drag racing:** any acceleration contest between two racing vehicles racing from a standing start over a precisely measured, straight line course.

**Drag racing facility:** any motor racing facility upon which conducted drag racing.

**Drag racing vehicle:** any racing vehicle which is participating in a drag race at a drag racing facility.

**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 motor racing facility:** any motor racing facility, the construction of which commenced prior to August 10, 1973

**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 section, any property-line-noise-source whose A, B or C law use classification changes, on or after August 10, 1973, shall not be 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 §1.4-1971 (R. 1976) "Specification for Sound Level Meters" and the latest revision thereof.

**Fast meter response:** as specified in ANSI §1.4-1971, or subsequent revisions.

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

**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.

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

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

**Leq:** equivalent continuous sound pressure level in decibels, ten times the logarithm to the base ten of the ratio of a time

mean-square sound pressure to the square of reference sound pressure. The reference pressure is 20 micronewtons per square meter.

Midget racing vehicle: a front engine, single seat, openwheel racing car smaller and of lesser engine displacement than standard cars of the type.

Motor racing facility: any facility or course upon which is conducted motor racing activities or events.

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.

Motorcycle racing: any racing event between two or more motorcycles.

Motorcycle racing facility: any motor racing facility upon which is conducted motorcycle racing, except oval racing facilities or drag racing facilities.

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

NHRA: National Hot Rod Association or its successor body.

New motor racing facility: any motor racing facility, the construction of which commenced on or after August 10, 1973.

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

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.

Oval racing: any contest between two or more racing vehicles on a closed or oval racing surface.

Oval racing facility: any motor racing facility, upon which is conducted oval racing.

Oval racing vehicle: any racing vehicle which is participating in an oval race at an oval racing facility.

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 Ill. Rev. Stat. 1981, ch. 95 1/2, par. 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.

Racing vehicle: every self-propelled device, in, upon or by which any person may be transported and which is participating in a motor racing activity or event at a motor racing facility.

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 Standard Land Use Coding Manual (SLUCM) Codes 110 through 190 and those portions of land used as specified by SLUCM Code 6741 used for sleeping.

SAE: Society of Automotive Engineers.

Slow Dynamic Characteristic: the dynamic characteristic specified as "Slow" in ANSI document §1.4-1971 (R. 1976) "Specification for Sound Level Meters."

SLUCM: the Standard Land Use Coding Manual (1969, United States Government Printing Office) which designates land activities by means of numerical codes.

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: an oscillation in pressure in air.

Sound level: in decibels, a weighted sound pressure level, determined by the use of metering characteristics and frequency weightings specified in ANSI §1.4-1971 "Specification for Sound Level Meters."

Sound pressure level: in decibels, 20 times the logarithm to the base 10 of the ratio of the magnitude of a particular sound pressure to the standard reference pressure. The standard reference pressure is 20 micronewtons per square meter.

**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, levelling 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.

**Special-motor-racing-event:** any motor racing event held on two consecutive days or less in which a substantial number of out-of-state motor racing vehicles are competing and which has been designated as such a special-motor-racing-event by the owner or operator of the motor racing facility.

**Sports car:** any automobile which meets the requirements and specifications of the General Competition Rules of the Sports Car Club of America, or its successor body, or any other sports car organization.

**Sports car racing:** any competitive event involving one or more sports cars.

**Sports car racing facility:** any motor racing facility upon which is conducted sports car racing.

**Sports car racing vehicles:** any racing vehicle which is participating in a sports car race at a sports car racing facility.

**Sprint racing vehicle:** a front-engined open wheel racing car used especially on short dirt tracks.

**Supercharged racing vehicle:** a racing vehicle equipped with a blower or compressor for increasing the volume air charge of an internal combustion engine over that which would be drawn in through the pumping action of the pistons.

**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.

**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 blowdown.

**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.

*(Source: Amended at 6 Ill. Reg. 10960, effective September 1, 1982)*

## 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. 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), and the latest revisions thereof, including ANSI § 1.1-1960, ANSI § 1.8-1969, ANSI § 1.2-1962, and SAE J-184. 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 Index Division of the Office of the Secretary of State as required by the Illinois Administrative Procedure Act, Ill. Rev. Stat. 1981, ch. 127, par. 1001 et seq.

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

Measurement procedures to determine whether emissions of sound comply with 35 Ill. Adm. Code 901 shall be in substantial conformity with ANSI § 1.6-1967, ANSI § 1.4-1971 — Type I Precision, ANSI § 1.11-1966, and ANSI § 1.13-1971 Field Method.

- 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 shall be in substantial conformity with ANSI § 1.4-1971 — Type I Precision or Type II General Purpose, and ANSI § 1.13-1971 Field Method provided that procedures for measurement under 35 Ill. Adm. Code 902.123 shall be in substantial conformity with those established by the U.S. Department of Transportation pursuant to Section 18 of the Federal Noise Control Act of 1972, 42 U.S.C. § 4901 et seq.

- 2) The Agency 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 29, 1975).

- d) Procedures Applicable only to 35 Ill. Adm. Code 903

- 1) Measurement procedures for 35 Ill. Adm. Code 903 shall be in substantial conformity with ANSI § 1.4-1971 Type I Precision or Type 2 General Purpose and ANSI § 1.13-1971 Field Method.

- 2) The Agency may provide for measuring sound emission at distances other than 50 feet specified in 35 Ill. Adm. Code 903.162, provided that correction factors are applied so that the sound levels so determined are substantially equivalent to those measured at 50 feet

- e) 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) shall be in substantial



conformity with ANSI § 1.4-1971 Type 1 Precision or Type 2 General Purpose and SAE Recommended Practice J192a, "Exterior Sound Level for Snowmobiles."

- 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 ANSI § 1.4-1971 Type 1 Precision or Type 2 General Purpose and SAE Recommended Practice J1161, "Operational Sound Level Measurement Procedure for Snow Vehicles."
- 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, Ill. Rev. Stat. 1981, ch. 127, par. 1001 et seq.

*(Source: Amended at 5 Ill. Reg. 8533, effective August 10, 1981)*

#### **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 circumstance 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.

### **APPENDIX A OLD RULE NUMBERS REFERENCED**

The following table is provided to aid in referencing old Board rule numbers to section numbers pursuant to codification.

<b>Old Part 1 of Chapter 8</b>	<b>35 Ill. Adm. Code Part 900</b>
Rule 101 .....	Section 900.101
Rule 102 .....	Section 900.102
Rule 103 .....	Section 900.103
Rule 104 .....	Section 900.104
Rule 105 .....	Section 900.105

# TITLE 35: ENVIRONMENTAL PROTECTION

## SUBTITLE H: NOISE

### CHAPTER I: POLLUTION CONTROL BOARD

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

Section	
901.101	Classification of Land According to Use
901.102	Sound Emitted to Class A Land
901.103	Sound Emitted to Class B Land
901.104	Impulsive Sound
901.105	Impact Forging Operations
901.106	Prominent Discrete Tones
901.107	Exceptions
901.108	Compliance Dates for Part 901
901.109	Impulsive Sound from Explosive Blasting

#### Appendix A Old Rule Numbers Referenced

#### Appendix B Standard Land Use Coding System

**AUTHORITY:** Implementing Section 25 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1981, ch. 111 1/2, pars. 1025 and 1027).

**SOURCE:** Originally filed as Part 2 of Chapter 8: Noise Pollution, effective August 10, 1973; amended at 2 Ill. Reg. 27, p. 223, effective June 26, 1978; amended at 5 Ill. Reg. 3461, effective March 24, 1981; amended at 5 Ill. Reg. 6371, effective June 1, 1981; amended at 5 Ill. Reg. 8533, effective August 10, 1981; amended at 6 Ill. Reg. 10960, effective September 1, 1982; codified at 7 Ill. Reg. 13646; amended at 7 Ill. Reg. 14519, effective October 17, 1983.

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

- Class A land shall include all land used as specified by SLUCM Codes 110 through 190 inclusive, 651, 674, 681 through 683 inclusive, 691, 711, 762, 7121, 7122, 7123 and 921.
- Class B land shall include all land used as specified by SLUCM Codes 397, 471 through 479 inclusive, 511 through 599 inclusive, 611 through 649 inclusive, 652 through 673 inclusive, 675, 692, 699, 7124, 7129, 719, 721, 722 except 7223, 723 through 761 inclusive except 7311, 769 through 790 inclusive, and 922.
- Class C land shall include all land used as specified by SLUCM Codes 211 through 299 inclusive, 311 through 396 inclusive, 399, 411 except 4111, 412 except 4121, 421, 422, 429, 441, 449, 460, 481 through 499 inclusive, 7223 and 7311 used for automobile and motorcycle racing, and 811 through 890 inclusive.
- A parcel or tract of land used as specified by SLUCM Code 81, 83, 91, or 922, 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 shall retain such B or C classification until the municipal government removes the classification adopted by it.

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

- Except as elsewhere in this Part provided, 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

- Except as elsewhere in this Part provided, 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 elsewhere in this Part provided, 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 Impulsive Sound

Except as elsewhere in this Part provided, no person shall cause or allow the emission of 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 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 Impulsive Sound Emitted to Receiving Class A or B Land		
	Class B Land	Class A Land	
		Daytime	Nighttime
Class A Land	50	50	45
Class B Land	57	50	45
Class C Land	61	56	46

(Source: Amended at 6 Ill. Reg. 10960, effective September 1, 1982)

## Section 901.105 Impact Forging Operations

- a) For purposes of this rule only the following are applicable:

- 1) Daytime hours shall mean any continuous 16 hour period between 6:00 a.m. and 11:00 p.m. local time; and
- 2) Nighttime hours shall mean 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.

Allowable Impulsive Sound Levels Emitted To Class A or B Land from New Impact Forging Operation

Class B Land	Class A Land	
	Daytime	Nighttime
59.5 Leq	53.5 Leq	48.5 Leq

- c) Limitations for Existing Impact Forging Operation

No existing 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 existing impact forging operation's property-line, unless such forging operation is granted a permanent site specific allowable operational level pursuant to subparagraph (d).

Allowable Impulsive Sound Levels Emitted To Class A or B Land from Existing Impact Forging Operation

Class B Land	Class A Land	
	Daytime	Nighttime
64.5 Leq	58.5 Leq	53.5 Leq

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

- 1) An existing impact forging operation which does not comply with subparagraph (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 abated 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 subparagraph (c) emitted by the petitioner into the community, in 5 decibel increments measured in Leq, shown on the map of the community;

E) The number of residences exposed to sound levels in excess of those permitted by subparagraph (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.

- 3) An existing impact forging operation seeking a permanent site specific operational level shall prepare and file its petition with the Board and Agency as applicable no later than December 1, 1983.

- 4) The Agency shall prepare a written evaluation regarding each petition seeking a permanent site specific operational level and shall file said evalua-

tion within ninety (90) days following receipt of the petition with both the Board and the 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 shall remain 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 below must comply with the site-specific operational level defined, or is otherwise subject to Section 901.105(c).

1) **Amforge Division of Rockwell International located at 119th Street, Chicago, Illinois shall:**

- A) Operate only ten forging hammers at any one time; and
- 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) Sound absorptive materials shall be installed on each of the forging hammer structures as each is routinely overhauled, but no later than January 1, 1987.

2) **Modern Drop Forge Company located at 139th Street and Western Avenue in Blue Island, Illinois shall:**

- 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.

3) **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.

(Source: Amended at 7 Ill. Reg. 14519, effective October 17, 1983)

**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 the applicable tables in Sections 901.102 through 901.104 for the octave band which contains such one-third octave band. In the application of this subsection, the applicable table for sound emitted from any existing property-line-noise-source to receiving Class A land, for both daytime and nighttime operations shall be found in Section 901.102(a).

**Section 901.107 Exceptions**

- a) Sections 901.102 through 901.106 inclusive shall not apply to sound emitted from land used as specified by SLUCM Codes 110, 140, 190, 691, and 742 except 7424 and 7425.
- b) Sections 901.102 through 901.106 inclusive shall not apply to sound emitted from emergency warning devices and unregulated safety relief valves.
- c) Sections 901.102 through 901.106 inclusive shall not apply to sound emitted from lawn care maintenance equipment and agricultural field machinery used during daytime hours. For the purposes of this subsection, grain dryers operated off the farm shall not be considered agricultural field machinery.
- d) Sections 901.102 through 901.106 inclusive shall not apply to sound emitted from equipment being used for construction.
- e) Section 901.102(b) shall 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 shall be governed during nighttime hours by the limits specified in Section 901.102.
- f) Sections 901.102 through 901.106 inclusive shall 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 shall not apply to sound emitted from land used as specified by SLUCM Codes 7223 and 7311 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 subparagraph shall 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 used as specified by SLUCM Codes 852 and 854, but such operations shall be governed by Section 901.109.

- i) Sections 901.102 through 901.106 inclusive, shall not apply to sound emitted from snowmobiles.

(Source: Amended at 6 Ill. Reg. 10960, effective September 1, 1982)

#### Section 901.108 Compliance Dates for Part 901

- a) Except as provided in subparagraphs (g), (i) and (j), every owner or operator of a new property-line-noise-source shall 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 shall comply with the standards and limitations of this Part on and after August 10, 1974.

(Agency Note: the word "after" in this subparagraph (b) was inadvertently deleted from the codified rules filed with the Secretary of State in 7 Ill. Reg. 13646.)

- 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 shall comply with the standards and limitations of this Part on and after February 10, 1975.
- d) Except as provided in subparagraphs (g) and (h), every owner or operator of an existing property-line-noise-source required to comply with Section 901.104 shall 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 shall comply with the standards and limitations of this Part on and after February 10, 1975.
- f) Repealed
- g) Every owner or operator of Class C land now or hereafter used as specified by SLUCM Code 4112 shall have until August 10, 1976 to bring the sound from railroad car coupling in compliance with Section 901.104.
- h) Existing impact forging operations as defined in Section 901.105 which do not seek permanent site specific allowable operational levels shall comply with Section 901.105 by December 1, 1983. Those seeking permanent site specific allowable operational levels pursuant to Section 901.105(d) shall comply as of the effective date of the site specific rule granted or denied.
- i) Every owner or operator of Class C land now and hereafter used as specified by SLUCM Code 291 shall comply with the standards and limitations of this Part on and after August 10, 1975.
- j) Every owner or operator of Class C land now or hereafter used as specified by SLUCM Code 7223 and 7311 when used for automobile and motorcycle racing shall comply with the standards and limitations of this Part on February 10, 1976.

(Source: Amended at 6 Ill. Reg. 10960, effective September 1, 1982)

#### Section 901.109 Impulsive Sound From Explosive Blasting

- a) During the daytime hours, after sunrise and before sunset, no person shall cause or allow any explosive blasting conducted on any Class C land used as specified by SLUCM Codes 852 and 854 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 Levels in Decibels of Explosive Blasting Sounds Emitted to Receiving Class A or B Land from Any Class C Land Used as Specified by SLUCM Code 852 or 854

Receiving Class A Land      Receiving Class B Land

109

114

- 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 $\pm 3$ dB (Hz)	Receiving Class A Land (dB)	Receiving Class B Land (dB)
$\leq 0.1$	135	140
$\leq 2.0$ but $> 0.1$	132	137
$\leq 6.0$ but $> 2.0$	130	135

- c) During the nighttime hours, after sunset and before sunrise, the allowable sound level limits in subparagraphs (a) and (b) shall 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 used as specified by SLUCM Code 852 or 854 shall 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.

(Source: Amended at 6 Ill. Reg. 10960, effective September 1, 1982)

#### APPENDIX A OLD RULE NUMBERS REFERENCED

The following table is provided to aid in referencing old Board rule numbers to section numbers pursuant to codification.

Old Part 2 of Chapter 8	35 Ill. Adm. Code Part 901
Rule 201	Section 901.101
Rule 202	Section 901.102(a)
Rule 203	Section 901.102(b)
Rule 204	Section 901.103
Rule 205	Repealed
Rule 205 (was old 206)	Section 901.104
Rule 206 (new rule)	Section 901.105
Rule 207	Section 901.106
Rule 208	Section 901.107
Rule 209	Section 901.108
Rule 210	Section 901.109
Added in Codification	Appendix A
Unnumbered Appendix to Chapter 8: Part II	Appendix B



# APPENDIX B

## STANDARD LAND USE CODING SYSTEM

U.S. Department of Transportation  
Federal Highway Administration  
Reprinted 1969

### B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS

Code	Category	Code	Category	Code	Category	SIC Reference <sup>1</sup>	Land Class
11	Household units.	110	Household units.	1100	Household units. <sup>2</sup>	—	A
12	Group quarters.	121	Rooming and boarding houses.	1210	Rooming and boarding houses. <sup>3</sup>	7021	↑
		122	Membership lodgings.	1221	Fraternity and sorority houses.	<sup>4</sup> Incl. 7041	
				1229	Other membership lodgings, NEC. <sup>5</sup>	Incl. 7041	
		123	Residence halls or dormitories.	1231	Nurses' homes.	—	
				1232	College dormitories.	—	
				1239	Other residence halls or dormitories, NEC.	—	
		124	Retirement homes and orphanages.	1241	Retirement homes.	—	
				1242	Orphanages.	—	
		125	Religious quarters.	1251	Convents.	—	
				1252	Monasteries.	—	
				1253	Rectories.	—	
				1259	Other religious quarters, NEC.	—	
		129	Other group quarters, NEC.	1290	Other group quarters, NEC.	—	
13	Residential hotels.	130	Residential hotels.	1300	Residential hotels. <sup>6</sup>	Incl. 7011	
14	Mobile home parks or courts.	140	Mobile home parks or courts.	1400	Mobile home parks or courts.	7031	
15	Transient lodgings.	151	Hotels, tourist courts, and motels.	1510	Hotels, tourist courts, and motels.	7011	
		159	Other transient lodgings, NEC.	1590	Other transient lodgings, NEC. <sup>7</sup>	—	
19	Other residential, NEC.	190	Other residential, NEC.	1900	Other residential, NEC.	—	↓ A

#### FOOTNOTES

<sup>1</sup> The SIC codes are listed for purposes of reference. They are the codes in the SIC system that most nearly correspond to the 4-digit land use activity indicated. (See ch. III, sec. A3, "The Use of Standard Industrial Classification Nomenclature.") A dash indicates that there is no corresponding SIC code.

<sup>2</sup> Code 1100—"Household units" are defined as a house, an apartment, or other group of rooms, or a single room that is intended for occupancy as separate living quarters. Occupants of "Household units" do not live and eat with other persons in the structure (such as in a boarding house), and there is either (1) direct access from the outside or through a common hall, or (2) there is a kitchen or cooking equipment for the exclusive use of the occupants of the unit. The occupants may be a family, a group of unrelated persons, or a person living alone. Mobile homes not in "Mobile home parks or courts" (code 14), but resting on a permanent type of foundation (e.g., a brick or concrete block foundation) are included as well as units that are vacant or that are used on a seasonal basis. Farm homes are also included under "Household units" and should be identified separately from the remainder of the farm which is coded under "Agriculture," code 81.

<sup>3</sup> Code 1210—"Rooming and boarding houses" are those that have 5 or more persons renting rooms, with or without board, and not related to the head or person in charge. Where there are less than 5 roomers, the total quarters are considered as one "Household unit" and is coded 1100.

<sup>4</sup> "Incl. 7041" is an abbreviation which indicates that the 4-digit land use activity category is only one of several categories of establishments that are included under SIC code 7041.

<sup>5</sup> "NEC" is an abbreviation for "not elsewhere coded."

<sup>6</sup> Code 1300—"Residential hotels" are those that have 75 percent or more of the available accommodations occupied by permanent guests (i.e., persons who reside more than 30 days). Hotels with less than 75 percent are included under code 15, "Transient lodgings."

<sup>7</sup> Code 1590—"Other transient lodgings, NEC" includes such establishments as the YMCA, YWCA, and YMHA when 50 percent or more of the floor area is devoted to lodging and associated activities and when less than 75 percent of the accommodations are occupied by permanent guests. If 75 percent or more of the guests are permanent, use code 1300. If 50 percent or more of the floor area is devoted to recreational activity, use code 7424, "Recreation centers (general)."

\*"Land Class" refers to Rule 201 Classifications. "A" denotes a Class A Land, "B" denotes a Class B Land and "C" denotes a Class C Land. "U" denotes a Land unclassified in Rule 201. (Added by IEPA.)

**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

Code	Category	Code	Category	Code	Category	SIC Reference	1.a. Cl.
21	Food and kindred products—manufacturing.	211	Meat products—manufacturing.	2111	Meat packing—manufacturing.	2011	C
				2112	Sausages and other prepared meat products—manufacturing.	2013	
				2113	Poultry and small game dressing and packing.	2015	
		212	Dairy products—manufacturing.	2121	Creamery butter—manufacturing.	2021	
				2122	Cheese, natural and processed.	2022	
				2123	Condensed and evaporated milk—manufacturing.	2023	
				2124	Ice cream and frozen desserts—manufacturing.	2024	
				2125	Fluid milk processing.	2026	
		213	Canning and preserving of fruits, vegetables, and seafoods.	2131	Canning and curing seafoods.	2031	
				2132	Canning specialty foods.	2032	
				2133	Canning fruits, vegetables, preserves, jams, and jellies.	2033	
				2134	Drying and dehydrating fruits and vegetables.	2034	
				2135	Pickling fruits and vegetables; vegetable sauces and seasonings; salad dressings—manufacturing.	2035	
				2136	Fresh or frozen packaged fish and seafoods.	2036	
				2137	Frozen fruits, fruit juices, vegetables, and specialties.	2037	
		214	Grain mill products—manufacturing.	2141	Flour and other grain mill products.	2041	
				2142	Preparing feeds for animals and fowls.	2042	
				2143	Cereal preparations.	2043	
				2144	Rice milling.	2044	
				2145	Blending and preparing flour.	2045	
				2146	Wet corn milling.	2046	
		215	Bakery products—manufacturing.	2150	Bakery products—manufacturing.	205	
		216	Sugar—manufacturing.	2160	Sugar—manufacturing.	206	
		217	Confectionery and related products—manufacturing.	2171	Candy and other confectionery products—manufacturing.	2071	
				2172	Chocolate and cocoa products—manufacturing.	2072	
				2173	Chewing gum—manufacturing.	2073	
		218	Beverage—manufacturing.	2181	Malt liquors—manufacturing.	2082	
				2182	Malt—manufacturing.	2083	
				2183	Wine, brandy, and brandy spirits—manufacturing.	2084	
				2184	Distilling, rectifying, and blending liquors.	2085	
				2185	Bottling and canning soft drinks and carbonated waters.	2086	
				2186	Flavor extracts and flavoring sirups manufacturing, NEC.	2087	
		219	Other food preparations and kindred products manufacturing, NEC.	2191	Cottonseed oil milling.	2091	
				2192	Soybean oil milling.	2092	
				2193	Vegetable oil milling (except cottonseed and soybean).	2093	
				2194	Animal and marine fats and oils (including grease and tallow)—manufacturing.	2094	
				2195	Roasting coffee and coffee products—manufacturing.	2095	
				2196	Shortening, table oils, margarine, and other edible fats and oils—manufacturing.	2096	
				2197	Ice—manufacturing.	2097	
				2198	Macaroni, spaghetti, vermicelli, and noodles—manufacturing.	2098	
				2199	Other food preparations and kindred products manufacturing, NEC.	2099	C



**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

Code	Category	Code	Category	Code	Category	SIC Reference <sup>1</sup>	Line and Class
22	Textile mill products—manufacturing.	221	Broad and narrow woven fabrics and other smallwares (cotton, manmade fibers, silk, and wool)—manufacturing.	2210	Broad and narrow woven fabrics and other smallwares (cotton, manmade fibers, silk, and wool)—manufacturing.	221, 222, 223, and 224	C ↑
		222	Knit goods—manufacturing.	2220	Knit goods—manufacturing.	225	
		223	Dyeing and finishing of textiles (except wool fabrics and knit goods).	2230	Dyeing and finishing of textiles (except wool fabrics and knit goods).	226	
		224	Floor coverings (rugs and carpets)—manufacturing.	2240	Floor coverings (rugs and carpets)—manufacturing.	227	
		225	Yarns and threads—manufacturing.	2250	Yarns and threads—manufacturing.	228	
		229	Other textile goods manufacturing, NEC.	2291	Felt goods (except woven felts and hats)—manufacturing.	2291	
				2292	Lace goods—manufacturing.	2292	
				2293	Padding and upholstery filling—manufacturing.	2293	
				2294	Processing waste and recovering fibers and flock.	2294	
				2295	Artificial leather and oil cloth manufacturing and other impregnating and coating fabrics (except rubberizing).	2295	
				2296	Tire cord and fabric—manufacturing.	2296	
				2297	Wool scouring, worsted combing, and towing to top.	2297	
				2299	Other textile goods manufacturing, NEC.	2299	
23	Apparel and other finished products made from fabrics, leather, and similar materials—manufacturing.	231	Men's, youths', and boys' suits, coats, and overcoats—manufacturing.	2310	Men's, youths', and boys' suits, coats, and overcoats—manufacturing.	231	
		232	Men's, youths', and boys' furnishings, work clothing, and allied garments—manufacturing.	2320	Men's, youths', and boys' furnishings, work clothing, and allied garments—manufacturing.	232	
		233	Women's, misses', juniors', girls', children's, and infants' outerwear—manufacturing.	2330	Women's, misses', juniors', girls', children's, and infants' outerwear—manufacturing.	233 and 236	
		234	Women's, misses', children's, and infants' undergarments—manufacturing.	2340	Women's, misses', children's, and infants' undergarments—manufacturing.	234	
		235	Hats, caps, and millinery—manufacturing.	2350	Hats, caps, and millinery—manufacturing.	235	
		236	Leather and leather products—manufacturing.	2361	Leather tanning and finishing.	3111	
				2362	Industrial leather belting and packing—manufacturing.	3121	
				2363	Boot and shoe cut stock and findings—manufacturing.	3131	
				2364	Footwear (except rubber)—manufacturing.	314	
				2365	Leather gloves and mittens—manufacturing.	315	
				2366	Luggage—manufacturing.	316	
				2367	Handbags and other personal leather goods—manufacturing.	317	
				2369	Other leather products manufacturing, NEC.	319	
		237	Fur goods—manufacturing.	2370	Fur goods—manufacturing.	237	C ↓

**I. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

Code	Category	Code	Category	Code	Category	SIC Reference <sup>1</sup>	La Cl
23	Apparel and other finished products made from fabrics, leather, and similar materials—manufacturing—Continued	238	Miscellaneous apparel and accessories—manufacturing.	2381	Dress and work gloves (except knit and all leather)—manufacturing.	2381	C
				2382	Robes and dressing gowns—manufacturing.	2384	
				2383	Raincoats and other waterproof outer garments—manufacturing.	2385	
				2384	Leather and sheep lined clothing—manufacturing.	2386	
				2385	Apparel belts—manufacturing.	2387	
				2389	Other miscellaneous apparel and accessory manufacturing, NEC.	2389	
		239	Other fabricated textile products manufacturing, NEC.	2391	Curtains and draperies—manufacturing.	2391	
				2392	Housefurnishings (except curtains and draperies)—manufacturing.	2392	
				2393	Textile bags—manufacturing.	2393	
				2394	Canvas products—manufacturing.	2394	
				2395	Pleating, decorative and novelty stitching and tucking for the trade.	2395	
				2396	Apparel findings and related products—manufacturing.	2396	
				2399	Other fabricated textile products manufacturing, NEC.	2397 and 2399	
24	Lumber and wood products (except furniture)—manufacturing.	241	Logging camps and logging contractors.	2410	Logging camps and logging contractors.	241	
		242	Sawmills and planing mills.	2421	Sawmills and planing mills, general.	2421	
				2422	Hardwood dimension and flooring—manufacturing.	2426	
				2429	Special sawmill products manufacturing, NEC.	2429	
		243	Millwork, veneer, plywood, and prefabricated structural wood products—manufacturing.	2431	Millwork.	2431	
				2432	Veneer and plywood—manufacturing.	2432	
				2433	Prefabricating wooden buildings and structural members—manufacturing.	2433	
		244	Wooden containers—manufacturing.	2440	Wooden containers—manufacturing.	244	
25	Furniture and fixtures—manufacturing.	249	Other lumber and wood products (except furniture) manufacturing, NEC.	2491	Wood preserving.	2491	
				2499	Other lumber and wood products (except furniture) manufacturing, NEC.	2499	
		251	Household furniture—manufacturing.	2510	Household furniture—manufacturing.	251	
		252	Office furniture—manufacturing.	2520	Office furniture—manufacturing.	252	
		253	Public building and related furniture—manufacturing.	2530	Public building and related furniture—manufacturing.	2531	
		254	Partitions, shelving, lockers, and office and store fixtures—manufacturing.	2540	Partitions, shelving, lockers, and office and store fixtures—manufacturing.	254	
		259	Other furniture and fixtures manufacturing, NEC.	2591	Venetian blinds and shades—manufacturing.	2591	
				2599	Other furniture and fixtures manufacturing, NEC.	2599	
26	Paper and allied products—manufacturing.	261	Pulp—manufacturing.	2610	Pulp—manufacturing.	261	
		262	Paper (except building paper)—manufacturing.	2620	Paper (except building paper)—manufacturing.	262	C

**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

Code	Category	Code	Category	Code	Category	SIC Reference	La Cl.
26	Paper and allied products— manufacturing—Con.	263	Paperboard—manufacturing.	2630	Paperboard—manufacturing.	263	
		264	Converted paper and paperboard products (except containers and boxes)—manufacturing.	2641	Paper coating and glazing.	2641	
				2642	Envelope—manufacturing.	2642	
				2643	Bags (except textile bags)—manu- facturing.	2643	
				2644	Wallpaper—manufacturing.	2644	
				2645	Die cut paper and paperboard: and cardboard—manufacturing.	2645	
				2646	Pressed and molded pulp goods— manufacturing.	2646	
				2647	Sanitary paper products—manufac- turing.	2647	
				2649	Other converted paper and paper- board products (except containers and boxes) manufacturing, NEC.	2649	
		265	Paperboard containers and boxes— manufacturing.	2650	Paperboard containers and boxes— manufacturing.	265	
		266	Building paper and building board—manufacturing.	2660	Building paper and building board— manufacturing.	266	
27	Printing, publishing, and allied industries.	271	Newspapers: publishing, publish- ing and printing.	2710	Newspapers: publishing, publishing and printing.	271	
		272	Periodicals: publishing, publishing and printing.	2720	Periodicals: publishing, publishing and printing.	272	
		273	Books: publishing, publishing and printing.	2730	Books: publishing, publishing and printing.	273	
		274	Commercial printing.	2740	Commercial printing.	275	
		275	Manifold business forms—manu- facturing.	2750	Manifold business forms—manufac- turing.	276	
		276	Greeting card—manufacturing.	2760	Greeting card—manufacturing.	277	
		277	Bookbinding and related indus- tries—manufacturing.	2771	Blankbooks, looseleaf binders, and devices—manufacturing.	2782	
				2772	Bookbinding and miscellaneous re- lated work—manufacturing.	2789	
		278	Printing trade service industries.	2781	Typesetting.	2791	
				2782	Photoengraving.	2793	
				2783	Electrotyping and stereotyping.	2794	
				2789	Other printing trade service indus- tries, NEC.	2799	
		279	Other printing and publishing, NEC.	2790	Other printing and publishing, NEC.	274	
28	Chemicals and allied prod- ucts—manufacturing.	281	Industrial inorganic and organic chemicals—manufacturing.	2810	Industrial inorganic and organic chemicals—manufacturing.	281	
		282	Plastics materials and synthetic resins, synthetic rubber, syn- thetic and other manmade fibers (except glass)—manufacturing.	2820	Plastics materials and synthetic resins, synthetic rubber, synthetic and other manmade fibers (except glass)—manufacturing.	282	
		283	Drug—manufacturing.	2831	Biological products—manufacturing.	2831	
				2832	Medicinal chemicals and botanical products—manufacturing.	2833	
				2833	Pharmaceutical preparations—man- ufacturing.	2834	
		284	Soap, detergents, and cleaning preparations, perfumes, cos- metics, and other toilet prepa- rations—manufacturing.	2841	Soap and detergents (except spe- cialty cleaners)—manufacturing.	2841	
				2842	Specialty cleaning, polishing, and sanitation preparations (except soap and detergents)—manufac- turing.	2842	
				2843	Surface active agents, finishing agents, sulfonated oils, and as- sistants—manufacturing.	2843	
				2844	Perfumes, cosmetics, and other toilet preparations—manufacturing.	2844	

**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

<i>Code</i>	<i>Category</i>	<i>Code</i>	<i>Category</i>	<i>Code</i>	<i>Category</i>	<i>SIC Reference</i> <sup>1</sup>	<i>La Cl.</i>
28	Chemicals and allied products—manufacturing—Continued	285	Paints, varnishes, lacquers, enamels, and allied products—manufacturing.	2850	Paints, varnishes, lacquers, enamels, and allied products—manufacturing.	285	C
		286	Gum and wood chemicals—manufacturing.	2860	Gum and wood chemicals—manufacturing.	286	
		287	Agricultural chemicals—manufacturing.	2870	Agricultural chemicals—manufacturing.	287	
		289	Other chemicals and allied products—manufacturing, NEC.	2891	Glue and gelatin—manufacturing.	2891	
				2892	Explosives—manufacturing.	2892	
29	Petroleum refining and related industries.			2893	Printing ink—manufacturing.	2893	
				2894	Carbon black—manufacturing.	2894	
				2899	Other chemicals and allied products manufacturing, NEC.	2899	
		291	Petroleum refining.	2910	Petroleum refining.	291	
		292	Paving and roofing materials—manufacturing.	2921	Paving mixtures and blocks—manufacturing.	2951	
31	Rubber and miscellaneous plastic products—manufacturing.			2922	Asphalt felts and coatings—manufacturing.	2952	
				2991	Lubricating oils and greases—manufacturing.	2992	
				2999	Other petroleum and coal products manufacturing, NEC.	2999	
		311	Tires and inner tubes—manufacturing.	3110	Tires and inner tubes—manufacturing.	301	
		312	Rubber footwear—manufacturing.	3120	Rubber footwear—manufacturing.	302	
32	Stone, clay, and glass products—manufacturing.	313	Reclaiming rubber.	3130	Reclaiming rubber.	303	
		314	Miscellaneous plastic products—manufacturing.	3140	Miscellaneous plastic products—manufacturing.	307	
		319	Other fabricated rubber products manufacturing, NEC.	3190	Other fabricated rubber products manufacturing, NEC.	306	
		321	Flat glass—manufacturing.	3210	Flat glass—manufacturing.	3211 and incl. 3231	
		322	Glass and glassware (pressed or blown)—manufacturing.	3221	Glass containers—manufacturing.	3221 and incl. 3231	
				3229	Other glass and glassware (pressed or blown) manufacturing, NEC.	3229 and incl. 3231	
		323	Cement (hydraulic)—manufacturing.	3230	Cement (hydraulic)—manufacturing.	324	
		324	Structural clay products—manufacturing.	3241	Brick and structural clay tile—manufacturing.	3251	
				3242	Ceramic wall and floor tile—manufacturing.	3253	
				3243	Clay refractories—manufacturing.	3255	
				3249	Other structural clay products manufacturing, NEC.	3259	
		325	Pottery and related products—manufacturing.	3251	Vitreous china plumbing fixtures, china, earthenware fittings, and bathroom accessories—manufacturing.	3261	
				3252	Vitreous china table and kitchen articles—manufacturing.	3262	
				3253	Fine earthenware (whiteware) table and kitchen articles—manufacturing.	3263	
				3254	Porcelain electrical supplies—manufacturing.	3264	
				3259	Other pottery and related products manufacturing, NEC.	3269	C

**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

Code	Category	Code	Category	Code	Category	SIC Reference	1st Cl.
32	Stone, clay, and glass products—manufacturing—Continued	326	Concrete, gypsum, and plaster products—manufacturing.	3261	Concrete brick and block—manufacturing.	3271	C
				3262	Concrete products (excluding brick and block)—manufacturing.	3272	
				3263	Concrete (ready mixed)—manufacturing.	3273	
				3264	Lime products—manufacturing.	3274	
				3265	Gypsum products—manufacturing.	3275	
		327	Cut stone and stone products—manufacturing.	3270	Cut stone and stone products—manufacturing.	328	
		328	Abrasive, asbestos, and miscellaneous nonmetallic mineral products—manufacturing.	3280	Abrasive, asbestos, and miscellaneous nonmetallic mineral products—manufacturing.	329	
33	Primary metal industries.	331	Blast furnaces, steel works, and the rolling and finishing of ferrous metals.	3311	Blast furnaces (including coke ovens), steel works, and the rolling of ferrous metals.	3312	
				3312	Electrometallurgical products—manufacturing.	3313	
				3313	Steel wire drawing and steel nails and spikes—manufacturing.	3315	
				3314	Cold rolled sheet, strip, and bars—manufacturing.	3316	
				3315	Steel pipe and tubes—manufacturing.	3317	
		332	Iron and steel foundries.	3320	Iron and steel foundries.	332	
		333	Primary smelting and refining of nonferrous metals.	3331	Primary smelting and refining of copper.	3331	
				3332	Primary smelting and refining of lead.	3332	
				3333	Primary smelting and refining of zinc.	3333	
				3334	Primary production of aluminum.	3334	
				3339	Other primary smelting and refining of nonferrous metals, NEC.	3339	
		334	Secondary smelting and refining of nonferrous metals and alloys.	3340	Secondary smelting and refining of nonferrous metals and alloys.	334	
		335	Rolling, drawing, and extruding of nonferrous metals.	3351	Rolling, drawing, and extruding of copper.	3351	
				3352	Rolling, drawing, and extruding of aluminum.	3352	
				3353	Rolling, drawing, and extruding of nonferrous metals (except copper and aluminum).	3356	
				3354	Drawing and insulating of nonferrous wire.	3357	
		336	Nonferrous foundries.	3360	Nonferrous foundries.	336	
		339	Other primary metal industries, NEC.	3390	Other primary metal industries, NEC.	339	
34	Fabricated metal products—manufacturing.	341	Ordnance and accessories.	3411	Guns, howitzers, mortars, and related equipment—manufacturing.	191	
				3412	Ammunition (except small arms) manufacturing and complete assembling of guided missiles and space vehicles.	192	
				3413	Tanks and tank components—manufacturing.	193	
				3414	Sighting and fire control equipment—manufacturing.	194	
				3415	Small arms—manufacturing.	195	
				3416	Small arms ammunition—manufacturing.	196	
				3419	Other ordnance and accessories manufacturing, NEC.	199	C

**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

Code	Category	Code	Category	Code	Category	SIC Reference	Lat Cla
34	Fabricated metal products—manufacturing—Continued	342	Machinery (except electrical)—manufacturing.	3421	Engines and turbines—manufacturing.	351	C
				3422	Farm machinery and equipment—manufacturing.	352	
				3423	Construction, mining, and materials handling machinery and equipment—manufacturing.	353	
				3424	Metalworking machinery and equipment—manufacturing.	354	
				3425	Special industry machinery (except metalworking machinery)—manufacturing.	355	
				3426	General industrial machinery and equipment—manufacturing.	356	
				3427	Office, computing, and accounting machines—manufacturing.	357	
				3428	Service industry machines—manufacturing.	358	
				3429	Other machinery manufacturing (except electrical), NEC.	359	
		343	Electrical machinery, equipment, and supplies—manufacturing.	3431	Electrical transmission and distribution equipment—manufacturing.	361	
				3432	Electrical industrial apparatus—manufacturing.	362	
				3433	Household appliances—manufacturing.	363	
				3434	Electric lighting and wiring equipment—manufacturing.	364	
				3435	Radio and television receiving sets (except communication types)—manufacturing.	365	
				3436	Communication equipment—manufacturing.	366	
				3437	Electronic components and accessories—manufacturing.	367	
				3439	Other electrical machinery, equipment, and supplies manufacturing, NEC.	369	
		344	Transportation equipment—manufacturing.	3441	Motor vehicles and motor vehicle equipment—manufacturing.	371	
				3442	Aircraft and parts—manufacturing.	372	
				3443	Ship and boat building and repairing.	373	
				3444	Railroad equipment—manufacturing.	374	
				3445	Motorcycles, bicycles, and parts—manufacturing.	375	
				3449	Other transportation equipment manufacturing, NEC.	379	
		349	Other fabricated metal products manufacturing, NEC.	3491	Metal cans—manufacturing.	341	
				3492	Cutlery, hand tools, and general hardware—manufacturing.	342	
				3493	Heating apparatus (except electrical) and plumbing fixtures—manufacturing.	343	
				3494	Fabricated structural metal products—manufacturing.	344	
				3495	Screw machine products and bolts, nuts, screws, rivets, and washers—manufacturing.	345	
				3496	Metal stamping—manufacturing.	346	
				3497	Coating, engraving, and allied services.	347	
				3498	Fabricated wire products (miscellaneous products)—manufacturing.	348	
				3499	Other fabricated metal products manufacturing, NEC.	349	C

**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

<i>Code</i>	<i>Category</i>	<i>Code</i>	<i>Category</i>	<i>Code</i>	<i>Category</i>	<i>SIC Reference</i>	<i>Last Cl.</i>
35	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks—manufacturing.	351	Engineering, laboratory, and scientific and research instruments and associated equipment—manufacturing.	3510	Engineering, laboratory, and scientific and research instruments and associated equipment—manufacturing.	381	
		352	Instruments for measuring, controlling, and indicating physical characteristics—manufacturing.	3521	Mechanical measuring and controlling instruments (except automatic temperature controls)—manufacturing.	3821	
				3522	Automatic temperature controls—manufacturing.	3822	
		353	Optical instruments and lenses—manufacturing.	3530	Optical instruments and lenses—manufacturing.	383	
		354	Surgical, medical, and dental instruments and supplies—manufacturing.	3541	Surgical and medical instruments and apparatus—manufacturing.	3841	
				3542	Orthopedic, prosthetic, and surgical appliances and supplies—manufacturing.	3842	
				3543	Dental equipment and supplies—manufacturing.	3843	
		355	Ophthalmic goods—manufacturing.	3550	Ophthalmic goods—manufacturing.	385	
		356	Photographic equipment and supplies—manufacturing.	3560	Photographic equipment and supplies—manufacturing.	386	
		357	Watches, clocks, clockwork operated devices, and parts—manufacturing.	3570	Watches, clocks, clockwork operated devices, and parts—manufacturing.	387	
39	Miscellaneous manufacturing, NEC.	391	Jewelry, silverware, and plated ware—manufacturing.	3911	Jewelry and precious metals—manufacturing.	3911	
				3912	Jewelers' findings and materials—manufacturing.	3912	
				3913	Lapidary work.	3913	
				3914	Silverware and plated ware—manufacturing.	3914	
		392	Musical instruments and parts—manufacturing.	3920	Musical instruments and parts—manufacturing.	393	
		393	Toys, amusement, sporting, and athletic goods—manufacturing.	3930	Toys, amusement, sporting, and athletic goods—manufacturing.	394	
		394	Pens, pencils, and other office and artists' materials—manufacturing.	3940	Pens, pencils, and other office and artists' materials—manufacturing.	395	
		395	Costume jewelry, costume novelties, buttons, and miscellaneous notions (except precious metals)—manufacturing.	3950	Costume jewelry, costume novelties, buttons, and miscellaneous notions (except precious metals)—manufacturing.	396	
		396	Tobacco—manufacturing.	3961	Cigarettes—manufacturing.	211	
				3962	Cigars—manufacturing.	212	
				3963	Tobacco (chewing and smoking) and snuff—manufacturing.	213	
				3964	Tobacco stemming and redrying.	214	C
		397	Motion picture production.	3970	Motion picture production.	7811	B

**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

Code	Category	Code	Category	Code	Category	SIC Reference <sup>1</sup>	Lat. Cla.
39	Miscellaneous manufacturing, NEC—Continued	399	Other miscellaneous manufacturing, NEC.	3991	Brooms and brushes—manufacturing.	3981	C
				3992	Linoleum, asphalted-felt-base, and other hard surface floor cover manufacturing, NEC.	3982	
				3993	Matches—manufacturing.	3983	
				3994	Lamp shades—manufacturing.	3987	
				3995	Morticians' goods—manufacturing.	3988	
				3996	Fur dressing and dyeing	3992	
				3997	Signs and advertising displays—manufacturing.	3993	
				3998	Umbrellas, parasols, and canes—manufacturing.	3995	
				3999	Other miscellaneous manufacturing, NEC.	3984 and 3999	C
41	Railroad, rapid rail transit, and street railway transportation.	411	Railroad transportation.	4111	Railroad right-of-way (excluding switching and marshaling yards).	—	U
				4112	Railroad switching and marshaling yards.	—	C
				4113	Railroad terminals (passenger).	—	
				4114	Railroad terminals (freight).	—	
				4115	Railroad terminals (passenger and freight).	—	
				4116	Railroad equipment and maintenance.	—	
				4119	Other railroad transportation, NEC.	—	C
		412	Rapid rail transit and street railway transportation.	4121	Rapid rail transit and street railway right-of-way. <sup>2</sup>	—	U
				4122	Rapid rail transit and street railway passenger terminals. <sup>3</sup>	—	C
				4123	Rapid rail transit and street railway equipment maintenance.	—	
				4129	Other rapid rail transit and street railway transportation, NEC.	—	
42	Motor vehicle transportation.	421	Bus transportation.	4211	Bus passenger terminals (intercity). <sup>4</sup>	—	
				4212	Bus passenger terminals (local). <sup>4</sup>	—	
				4213	Bus passenger terminals (intercity and local). <sup>4</sup>	—	
				4214	Bus garaging and equipment maintenance.	—	
				4219	Other bus transportation, NEC.	—	
		422	Motor freight transportation.	4221	Motor freight terminals.	—	
				4222	Motor freight garaging and equipment maintenance.	—	
				4229	Other motor freight transportation, NEC.	—	C

**FOOTNOTES**

<sup>1</sup> The SIC codes are listed for purposes of reference. They are the codes in the SIC system that most nearly correspond to the 4-digit land use activity indicated. (See ch. III, sec. A3, "The Use of Standard Industrial Classification Nomenclature.") A dash indicates that there is no corresponding SIC code.



**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

Code	Category	Code	Category	Code	Category	SIC Reference <sup>1</sup>	Land Class
42	Motor vehicle transportation—Continued	429	Other motor vehicle transportation, NEC.	4291	Taxicab transportation.	4121	C
				4299	Other motor vehicle transportation, NEC.	—	C
43	Aircraft transportation.	431	Airports and flying fields.	4311	Airport and flying field landing/takeoff fields.	—	↓
				4312	Airport and flying field terminals (passenger).	—	↓
				4313	Airport and flying field terminals (freight).	—	↓
				4314	Airport and flying field terminals (passenger and freight).	—	↓
				4315	Aircraft storage and equipment maintenance.	—	↓
				4319	Other airports and flying fields, NEC.	—	↓
		439	Other aircraft transportation, NEC.	4391	Heliport landing/takeoff pads. <sup>4</sup>	—	↓
				4399	Other aircraft transportation, NEC.	—	U
44	Marine craft transportation <sup>5</sup>	441	Marine terminals. <sup>7</sup>	4411	Marine terminals (passenger). <sup>8</sup>	—	C
				4412	Marine terminals (freight).	—	↑
				4413	Marine terminals (passenger and freight).	—	↑
				4414	Marine terminals (commercial fishing).	—	↑
				4419	Other marine terminals, NEC.	—	↓
		449	Other marine craft transportation, NEC.	4490	Other marine craft transportation, NEC.	—	C
45	Highway and street right-of-way.	451	Freeways.	4510	Freeways. <sup>9</sup>	—	U
		452	Expressways.	4520	Expressways. <sup>10</sup>	—	↑
		453	Parkways.	4530	Parkways. <sup>11</sup>	—	↑
		454	Arterial streets.	4540	Arterial streets. <sup>12</sup>	—	↑
		455	Collector/distributor streets.	4550	Collector/distributor streets. <sup>13</sup>	—	↑
		456	Local access streets.	4560	Local access streets. <sup>14</sup>	—	↑
		457	Alleys.	4570	Alleys. <sup>15</sup>	—	↓
		459	Other highway and street right-of-way, NEC.	4590	Other highway and street right-of-way, NEC.	—	U
46	Automobile parking.	460	Automobile parking.	4600	Automobile parking. <sup>16</sup>	—	C
47	Communication.	471	Telephone communication.	4711	Telephone exchange stations.	—	B
				4712	Telephone relay towers (microwave).	—	↑
				4719	Other telephone communication, NEC.	—	↑
		472	Telegraph communication.	4721	Telegraph message centers.	—	↑
				4722	Telegraph transmitting and receiving stations (only).	—	↑
				4729	Other telegraph communication, NEC.	—	↑
		473	Radio communication.	4731	Radio broadcasting studios (only).	—	↑
				4732	Radio transmitting stations and towers.	—	↑
				4739	Other radio communication, NEC.	—	↑
		474	Television communication.	4741	Television broadcasting studios (only).	—	↑
				4742	Television transmitting stations and relay towers.	—	↑
				4749	Other television communication, NEC.	—	↑
		475	Radio and television communication (combined systems).	4751	Radio and television broadcasting studios, only (combined systems).	—	↑
				4759	Other combined radio and television communication, NEC.	—	↑
		479	Other communication, NEC.	4790	Other communication, NEC.	—	↓

**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

Code	Category	Code	Category	Code	Category	SIC Reference	La. Cla.
48	Utilities.	481	Electric utility.	4811	Electric transmission right-of-way. <sup>17</sup>	—	C
				4812	Electric generation plants.	—	A
				4813	Electricity regulating substations.	—	
				4819	Other electric utility, NEC.	—	
		482	Gas utility.	4821	Gas pipeline right-of-way. <sup>17</sup>	—	
				4822	Gas production plants.	—	
				4823	Natural or manufactured gas storage and distribution points.	—	
				4824	Gas pressure control stations.	—	
				4829	Other gas utilities, NEC.	—	
		483	Water utilities and irrigation.	4831	Water pipeline right-of-way. <sup>17</sup>	—	
				4832	Water treatment plants (purification).	—	
				4833	Water storage. <sup>18</sup>	—	
				4834	Irrigation distribution channels.	—	
				4835	Water pressure control stations.	—	
				4839	Other water utilities and irrigation, NEC.	—	
		484	Sewage disposal.	4841	Sewage treatment plants.	—	
				4842	Sewage sludge drying beds.	—	
				4843	Sewage pressure control stations.	—	
				4849	Other sewage disposal, NEC.	—	
		485	Solid waste disposal.	4851	Refuse incineration.	—	
				4852	Central garbage grinding stations.	—	
				4853	Compositing plants.	—	
				4854	Sanitary land fills.	—	
				4855	Refuse disposals.	—	
				4856	Industrial waste disposals.	—	
				4857	Active slag dumps and mineral waste disposals.	—	
				4859	Other solid waste disposal, NEC.	—	
		489	Other utilities, NEC.	4890	Other utilities, NEC.	—	
	Other transportation, communication, and utilities, NEC.	491	Other pipeline right-of-way and pressure control stations, NEC.	4911	Petroleum pipeline right-of-way. <sup>17</sup>	—	
				4912	Petroleum pressure control stations.	—	
				4919	Other pipeline right-of-way and pressure control stations, NEC.	—	
		492	Transportation services and arrangements.	4921	Freight forwarding services.	4041 and 4712	
				4922	Packing and crating services.	4783	
				4923	Travel arranging services.	472	
				4924	Transportation ticket services. <sup>19</sup>	—	
				4929	Other transportation services and arrangements, NEC.	—	
		499	Other transportation, communication, and utilities, NEC.	4990	Other transportation, communication, and utilities, NEC.	—	C

**FOOTNOTES**

<sup>1</sup> The SIC codes are listed for purposes of reference. They are the codes in the SIC system that most nearly correspond to the 4-digit and use activity indicated. (See ch. III, sec. A3, "The Use of Standard Industrial Classification Nomenclature.") A dash indicates that there is no corresponding SIC code.

Code 4121—"Rapid rail transit and street railway right-of-way" includes only that land which is *not* within public right-of-way (e.g., within a public street right-of-way). Railroad right-of-way used by rapid rail transit is considered to be railroad right-of-way and is coded 4111.

<sup>2</sup> Code 4122—"Rapid rail transit and street railway passenger terminals" identifies only those terminals that are *not* located within public right-of-way (e.g., within a public street right-of-way).

<sup>3</sup> Codes 4211, 4212, 4213—"Bus passenger terminals" identifies only those terminals that are *not* located on the public right-of-way (e.g., within a public street right-of-way).

<sup>4</sup> Code 4391—"Heliport landing/takeoff pads" are identified only when they are separate activities and not a part of code 431, "Airports and flying fields."

<sup>5</sup> Code 41—"Marine craft transportation." The maintenance and repair of marine craft should be coded 3443, "Ship and boat building and repairing."

<sup>6</sup> Code 441—"Marine terminals" include all docking facilities (e.g., wharves, piers, and docks) and associated areas that are used by commercial passenger, freight, and fishing craft. Docking facilities that primarily serve recreational type of marine craft are identified under code 744, "Marinas."

<sup>7</sup> Code 4411—"Marine terminals (passenger)" include ferry terminals.

<sup>8</sup> Code 4510—"Freeways" are divided highways for through traffic with full control of access and no cross traffic at grade.

<sup>9</sup> Code 4520—"Expressways" are divided highways for through traffic with full or partial control of access with grade separations at major crossroads.

Footnotes continued on following page.

## B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued

<sup>11</sup> Code 4530—"Parkways" are highways for noncommercial traffic, with full or partial control of access. They are located within a park or within a ribbon of parklike development.

<sup>12</sup> Code 4540—"Arterial streets" are those streets which serve movements of traffic and are not freeways, expressways, and parkways. Generally there is no control of access.

<sup>13</sup> Code 4550—"Collector/distributor streets" are those streets that collect traffic from the local streets and channel it into the arterial system. These streets also provide necessary cross-connections between arterials. The collector/distributor street does not handle long through trips, and it is not continuous for any great length.

<sup>14</sup> Code 4560—"Local access streets" are those used primarily for access to residences, businesses, or other abutting activities.

<sup>15</sup> Code 4570—"Alleys" are minor narrow streets usually without sidewalks and on which building adjoin from the rear.

<sup>16</sup> Code 4600—"Automobile parking" includes nonresidential off-street parking that is 5,000 square feet or greater (or approximately

17 parking spaces), and that serves no other single type of activity. This code includes parking on open lots, parking within parking structures, parking within structures that also house other activities (e.g., parking area in an office building), and the parking area at shopping centers. Parking areas of less than 5,000 square feet are not identified as a separate activity.

<sup>17</sup> Codes 4811, 4821, 4831, 4911—These codes identify those areas where the surface is devoted exclusively to the right-of-way of the respective activities and is used for no other purposes.

<sup>18</sup> Code 4833—"Water storage" includes impounded surface water areas or water tanks used for storage. Lakes or other natural water formations are identified under code 93, "Water areas."

<sup>19</sup> Code 4924—"Transportation ticket services" include the ticket offices of any of the transportation systems. The ticket offices are identified only when they are a separate and distinct activity, not located within one of the transportation terminals.

Code	Category	Code	Category	Code	Category	SIC Reference	Land Class
51	Wholesale trade. <sup>2</sup>	511	Motor vehicles and automotive equipment—wholesale.	5111	Automobiles and other motor vehicles—wholesale.	5012	B ↑
				5112	Automotive equipment—wholesale.	5013	
				5113	Tires and tubes—wholesale.	5014	
		512	Drugs, chemicals, and allied products—wholesale.	5121	Drugs, drug proprietaries and druggists' sundries—wholesale.	5022	
				5122	Paints and varnishes—wholesale.	5028	
				5129	Other drugs, chemicals, and allied products, wholesale, NEC.	5029	
		513	Dry goods and apparel—wholesale.	5131	Dry goods, piece goods, and notions—wholesale.	5032	
				5132	Apparel and accessories, hosiery, and lingerie—wholesale.	5035	
				5133	Footwear—wholesale.	5039	
		514	Groceries and related products—wholesale.	5141	Groceries (general line)—wholesale.	5042	
				5142	Dairy products—wholesale.	5043	
				5143	Poultry and poultry products—wholesale.	5044	
				5144	Confectionery—wholesale.	5045	
				5145	Fish and seafoods—wholesale.	5046	
				5146	Meat and meat products—wholesale.	5047	
				5147	Fruits and vegetables (fresh)—wholesale.	5048	
				5149	Other groceries and related products wholesale, NEC.	5049	
		515	Farm products (raw materials)—wholesale.	5151	Cotton—wholesale.	Incl. 5051	
				5152	Grain—wholesale.	Incl. 5051	
				5153	Hides, skins, and raw furs—wholesale.	Incl. 5051	
				5154	Leaf tobacco—wholesale.	Incl. 5051	
				5155	Wool and mohair—wholesale.	Incl. 5051	
				5156	Livestock—wholesale.	Incl. 5051	
				5157	Horses and mules—wholesale.	Incl. 5051	
				5159	Other farm products wholesale, NEC.	Incl. 5051	
		516	Electrical goods—wholesale.	5161	Electrical apparatus and equipment, wiring supplies, and construction materials—wholesale.	5063	
				5162	Electrical appliances, television, and radio sets—wholesale.	5064	
				5163	Electronic parts and equipment—wholesale.	5065	
		517	Hardware, plumbing, heating equipment, and supplies—wholesale.	5171	Hardware—wholesale.	5072	B ↓
				5172	Plumbing and heating equipment and supplies—wholesale.	5074	
				5173	Air conditioning, refrigerated equipment, and supplies—wholesale.	5077	

**3. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

Code	Category	Code	Category	Code	Category	SIC Reference <sup>1</sup>	I. C
51	Wholesale trade <sup>2</sup> — Continued	518	Machinery, equipment, and supplies—wholesale.	5181	Commercial and industrial machin- ery, equipment, and supplies— wholesale.	5082	
				5182	Farm machinery and equipment— wholesale.	5083	
				5183	Professional equipment and sup- plies—wholesale.	5086	
				5184	Equipment and supplies for service establishments—wholesale.	5087	
				5185	Transportation equipment and sup- plies (except motor vehicles)— wholesale.	5088	
				5189	Other machinery, equipment, and supplies wholesale, NEC.	5089	
		519	Other wholesale trade, NEC.	5191	Metals and minerals (except petro- leum products and scrap)—whole- sale.	5091	
				5192	Petroleum bulk stations and termi- nals—wholesale.	5092	
				5193	Scrap and waste materials—whole- sale.	5093	
				5194	Tobacco and tobacco products— wholesale.	5094	
				5195	Beer, wine, and distilled alcoholic beverages—wholesale.	5095	
				5196	Paper and paper products—whole- sale.	5096	
				5197	Furniture and, homefurnishings— wholesale.	5097	
				5198	Lumber and construction materials— wholesale.	5098	
				5199	Other wholesale trade, NEC.	5099	
52	Retail trade—building ma- terials, hardware, and farm equipment.	521	Lumber and other building ma- terials—retail.	5211	Lumber yards—retail.	5211	
				5212	Building materials—retail.	5212	
		522	Heating and plumbing equip- ment—retail.	5220	Heating and plumbing equipment— retail.	522	
		523	Paint, glass, and wallpaper— retail.	5230	Paint, glass, and wallpaper—retail.	523	
		524	Electrical supplies—retail.	5240	Electrical supplies—retail.	524	
		525	Hardware and farm equip- ment—retail.	5251	Hardware—retail.	5251	
				5252	Farm equipment—retail.	5252	
53	Retail trade—general mer- chandise.	531	Department stores—retail.	5310	Department stores—retail.	531	
		532	Mail order houses—retail.	5320	Mail order houses—retail.	532	
		533	Limited price variety stores— retail.	5330	Limited price variety stores—retail.	533	
		534	Merchandise vending machine operators—retail.	5340	Merchandise vending machine op- erators—retail.	534	
		535	Direct selling organizations— retail.	5350	Direct selling organizations—retail.	535	
		539	Other retail trade—general merchandise, NEC.	5391	Dry goods and general merchan- dise—retail.	5392	
				5392	General stores—retail.	5393	
54	Retail trade—food.	541	Groceries (with or without meat)—retail.	5410	Groceries (with or without meat)— retail.	541	
		542	Meats and fish—retail.	5421	Meats—retail.	5422	
				5422	Fish and seafoods—retail.	5423	

**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

<i>Code</i>	<i>Category</i>	<i>Code</i>	<i>Category</i>	<i>Code</i>	<i>Category</i>	<i>SIC Reference</i> <sup>1</sup>	<i>Lana Class</i>
54	Retail trade—food—Continued	543	Fruits and vegetables—retail.	5430	Fruits and vegetables—retail.	543	B
		544	Candy, nut, and confectionery—retail.	5440	Candy, nut, and confectionery—retail.	544	
		545	Dairy products—retail.	5450	Dairy products—retail.	545	
		546	Bakeries—retail.	5461	Bakeries (manufacturing)—retail. <sup>2</sup>	5462	
				5462	Bakeries (nonmanufacturing)—retail. <sup>4</sup>	5463	
		549	Other retail trade—food, NEC.	5491	Egg and poultry—retail.	5491	
				5499	Other retail trade—food, NEC.	5499	
55	Retail trade—automotive, marine craft, aircraft, and accessories.	551	Motor vehicles—retail.	5511	Motor vehicles (new and used cars)—retail.	551	
				5512	Motor vehicles (used cars only)—retail.	552	
		552	Tires, batteries, and accessories—retail.	5520	Tires, batteries, and accessories—retail.	553	
		553	Gasoline service stations.	5530	Gasoline service stations.	554	
		559	Other retail trade—automotive, marine craft, aircraft, and accessories, NEC.	5591	Marine craft and accessories—retail.	Incl. 5599	
				5592	Aircraft and accessories—retail.	Incl. 5599	
				5599	Other retail trade—automotive, marine craft, aircraft, and accessories, NEC.	Incl. 5599	
56	Retail trade—apparel and accessories.	561	Men's and boys' clothing and furnishings—retail.	5610	Men's and boys' clothing and furnishings—retail.	561	
		562	Women's ready-to-wear—retail.	5620	Women's ready-to-wear—retail.	562	
		563	Women's accessories and specialties—retail.	5630	Women's accessories and specialties—retail.	563	
		564	Children's and infants' wear—retail.	5640	Children's and infants' wear—retail.	564	
		565	Family clothing—retail.	5650	Family clothing—retail.	565	
		566	Shoes—retail.	5660	Shoes—retail.	566	
		567	Custom tailoring.	5670	Custom tailoring.	567	
		568	Furriers and fur apparel—retail.	5680	Furriers and fur apparel—retail.	568	
		569	Other retail trade—apparel and accessories, NEC.	5690	Other retail trade—apparel and accessories, NEC.	569	
57	Retail trade—furniture, homefurnishings, and equipment.	571	Furniture, homefurnishings, and equipment—retail.	5711	Furniture—retail.	5712	
				5712	Floor coverings—retail.	5713	
				5713	Draperies, curtains, and upholstery—retail.	5714	
				5714	China, glassware, and metalware—retail.	5715	
				5719	Other furniture, homefurnishings, and equipment retail, NEC.	5719	
		572	Household appliances—retail.	5720	Household appliances—retail.	572	
		573	Radios, televisions, and music supplies—retail.	5731	Radios and televisions—retail.	5732	
				5732	Music supplies—retail.	5733	
58	Retail trade—eating and drinking.	581	Eating places.	5810	Eating places. <sup>3</sup>	5812	
		582	Drinking places (alcoholic beverages).	5820	Drinking places (alcoholic beverages).	5813	B

**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

Code	Category	Code	Category	Code	Category	SIC Reference <sup>1</sup>	L. C
59	Other retail trade, NEC.	591	Drug and proprietary—retail.	5910	Drug and proprietary—retail.	591	
		592	Liquor—retail.	5920	Liquor—retail.	592	
		593	Antiques and secondhand merchandise—retail.	5931	Antiques—retail.	5932	
				5932	Secondhand merchandise—retail.	5933	
		594	Book and stationery—retail.	5941	Books—retail.	5942	
				5942	Stationery—retail.	5943	
		595	Sporting goods and bicycles—retail.	5951	Sporting goods—retail.	5952	
				5952	Bicycles—retail.	5953	
		596	Farm and garden supplies—retail.	5961	Hay, grains, and feeds—retail.	5962	
				5969	Other farm and garden supplies retail, NEC.	5969	
		597	Jewelry—retail.	5970	Jewelry—retail.	597	
		598	Fuel and ice—retail.	5981	Fuel and ice dealers (except fuel oil and bottled gas dealers)—retail.	5982	
				5982	Fuel oil—retail.	5983	
				5983	Bottled gas—retail.	5984	
		599	Other retail trade, NEC.	5991	Florists—retail.	5992	
				5992	Cigars and cigarettes—retail.	5993	
				5993	Newspapers and magazines—retail.	5994	
				5994	Cameras and photographic supplies—retail.	5996	
				5995	Gifts, novelties, and souvenirs—retail.	5997	
				5996	Optical goods—retail.	5998	
				5999	Other retail trade, NEC.	5999	
61	Finance, insurance, and real estate services.	611	Banking and bank-related functions.	6111	Banking services.	601, 602, 603, and 604	
				6112	Bank-related functions.	605	
		612	Credit services (other than banks).	6121	Savings and loan associations.	612	
				6122	Agricultural, business, and personal credit services (including credit unions).	613, 614, and 615	
				6129	Other credit services (other than banks), NEC.	611 and 616	
		613	Security and commodity brokers, dealers, exchanges, and services.	6131	Security brokers, dealers, and flotation services.	6211	
				6132	Commodity contracts brokers and dealers services.	6221	
				6133	Security and commodity exchanges.	623	
				6134	Security and commodity allied services.	628	
		614	Insurance carriers, agents, brokers, and services.	6141	Insurance carriers.	63	
				6142	Insurance agents, brokers, and services.	64	

**FOOTNOTES**

The SIC codes are listed for purposes of reference. They are the codes in the SIC system that most nearly correspond to the 4-digit land use activity indicated. (See ch. III, sec. A3, "The Use of Standard Industrial Classification Nomenclature.") A dash indicates that there is no corresponding SIC code.

<sup>1</sup> Code 51—"Wholesale trade." A code of "0" is used in the auxiliary position for those wholesalers who maintain a definite storage area on

the premises. For example, 5122-0 is a wholesaler of paints and varnishes who has a definite storage area set aside for his merchandise.

<sup>2</sup> Code 5461—"Bakeries (manufacturing)—retail" include only those bakeries that produce on the premises some or all of the products sold.

<sup>3</sup> Code 5462—"Bakeries (nonmanufacturing)—retail" include only those bakeries that do not produce on the premises the products that are sold.

<sup>4</sup> Code 5810—"Eating places" include both establishments serving only food as well as those serving both food and alcoholic beverages.

**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

<i>Code</i>	<i>Category</i>	<i>Code</i>	<i>Category</i>	<i>Code</i>	<i>Category</i>	<i>SIC Reference</i>	<i>Land Class</i>
61	Finance, insurance, and real estate services—Continued	615	Real estate and related services.	6151	Real estate operators (except developers) and lessors.	651	B
				6152	Real estate agents, brokers, and management services.	653	
				6153	Title abstracting services.	654	
				6154	Real estate subdividing and developing services.	655	
				6155	Real estate operative builders.	656	
62	Personal services.	616	Holding and investment services.	6156	Combinations of real estate, insurance, loan, and law services.	661	
				6159	Other real estate and related services, NEC.	—	
				6160	Holding and investment services.	67	
				6190	Other finance, insurance, and real estate services, NEC.	—	
				6211	Laundrying, dry cleaning, and dyeing services (except rugs).	7211, 7212, and 7216	
		621	Laundrying, dry cleaning, and dyeing services.	6212	Linen supply and industrial laundry services.	7213	
				6213	Diaper services.	7214	
				6214	Laundrying and dry cleaning (self-service).	7215	
				6215	Rug cleaning and repair services.	7217	
				6220	Photographic services (including commercial).	722	
		623	Beauty and barber services.	6231	Beauty services.	723	
				6232	Barber services.	724	
		624	Funeral and crematory services; cemeteries.	6241	Funeral and crematory services.	726	
				6242	Cemeteries.	—	
		625	Apparel repair, alteration and cleaning pickup services; shoe repair services.	6251	Pressing, alteration, and garment repair; laundry and dry cleaning pickup services (only).	7271	
				6252	Fur repair and storage services.	7272	
				6253	Shoe repair, shoe shining, and hat cleaning services.	725	
63	Business services.	629	Other personal services, NEC.	6290	Other personal services, NEC.	729	
				6311	Advertising services (general).	7311	
		631	Advertising services.	6312	Outdoor advertising services.	7312	
				6319	Other advertising services, NEC.	7319	
		632	Consumer and mercantile credit reporting services; adjustment and collection services.	6320	Consumer and mercantile credit reporting services; adjustment and collection services.	7321	
				6331	Direct mail advertising services.	7331	
				6332	Blueprinting and photocopying service.	7332	
		633	Duplicating mailing and stenographic services.	6339	Stenographic services and other duplicating and mailing services, NEC.	7339	
				6341	Window cleaning services.	7341	
				6342	Disinfecting and exterminating services.	7342	
		634	Dwelling and other building services.	6349	Other dwelling and building services, NEC.	7349	
				6350	News syndicate services.	735	
		635	News syndicate services.	6360	Employment services.	736	B

**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

<i>Code</i>	<i>Category</i>	<i>Code</i>	<i>Category</i>	<i>Code</i>	<i>Category</i>	<i>SIC Reference</i> <sup>1</sup>
63	Business services—Continued	637	Warehousing and storage services. <sup>2</sup>	6371	Farm products warehousing and storage (excluding stock yards).	4221
				6372	Stockyards.	4731
				6373	Refrigerated warehousing (except food lockers).	4222
				6374	Food lockers (with or without food preparation facilities).	4223
				6375	Household goods warehousing and storage.	4224
				6376	General warehousing and storage.	4225
				6379	Other warehousing and storage, NEC.	4226
		639	Other business services, NEC.	6391	Research, development, and testing services.	7391
				6392	Business and management consulting services.	7392
				6393	Detective and protective services.	7393
				6394	Equipment rental and leasing services.	7394
				6395	Photofinishing services.	7395
				6396	Trading stamp services.	7396
				6397	Automobile and truck rental services.	7511
				6398	Motion picture distribution and services.	7812 and 782
				6399	Other business services, NEC.	7399
64	Repair services.	641	Automobile repair and services.	6411	Automobile repair services.	753
				6412	Automobile wash services.	Incl. 7541
				6419	Other automobile services (except repair and wash), NEC.	Incl. 7541
		649	Other repair services, NEC.	6491	Electrical repair services (except radio and television).	Incl. 7621
				6492	Radio and television repair services.	7622
				6493	Watch, clock, and jewelry repair services.	763
				6494	Reupholstery and furniture repair services.	764
				6495	Armature rewinding services.	7694
				6499	Other repair services, NEC.	7699
65	Professional services.	651	Medical and other health services.	6511	Physicians' services.	801, 803, and 804
				6512	Dental services.	802
				6513	Hospital services.	806
				6514	Medical laboratory services.	8071
				6515	Dental laboratory services.	8072
				6516	Sanitariums, convalescent, and rest home services.	8092
				6517	Medical clinics—out-patient services.	—
				6519	Other medical and health services, NEC.	8099
		652	Legal services.	6520	Legal services.	811
		659	Other professional services, NEC.	6591	Engineering and architectural services.	891
				6592	Educational and scientific research services.	892
				6593	Accounting, auditing, and book-keeping services.	893
				6594	Urban planning services.	Incl. 899
				6599	Other professional services, NEC.	Incl. 899
66	Contract construction services.	661	General contract construction services.	6611	Building construction—general contractor services.	151
				6619	Other general construction contractor services, NEC.	16



**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

Code	Category	Code	Category	Code	Category	SIC Reference <sup>1</sup>	Line Class		
66	Contract construction services—Continued	662	Special construction trade services.	6621	Plumbing, heating, and air conditioning services.	171	B ↑		
				6622	Painting, paper hanging, and decorating services.	172			
				6623	Electrical services.	173			
				6624	Masonry, stonework, tile setting, and plastering services.	174			
				6625	Carpentering and wood flooring.	175			
				6626	Roofing and sheet metal services.	176			
				6627	Concrete services.	177			
				6628	Water well drilling services.	178			
				6629	Other special construction trade services, NEC.	179			
				67	Governmental services.	671		Executive, legislative, and judicial functions.	6710
672	Protective functions and their related activities.	6721	Police protection and related activities.			Incl. 919, 929, and 939	A ↑		
		6722	Fire protection and related activities.			Incl. 919, 929, and 939			
		6723	Civil defense and related activities.			Incl. 919, 929, and 939			
		6729	Other protective functions and their related activities, NEC.			Incl. 919, 929, and 939			
673	Postal services.	6730	Postal services.			Incl. 919	B		
674	Correctional institutions.	6741	Prisons.			Incl. 919, 929, and 939	A ↑		
		6749	Other correctional institutions, NEC.			Incl. 919, 929, and 939	A ↓		
675	Military bases and reservations. <sup>4</sup>	6751	Military training bases.			Incl. 919 and 929	B ↑		
		6752	Military defense installations.			Incl. 919 and 929			
		6753	Military storage depots and transportation centers.			Incl. 919 and 929			
		6754	Military maintenance centers.			Incl. 919 and 929			
		6755	Military administration or command centers.			Incl. 919 and 929			
		6756	Military communication centers.			Incl. 919 and 929			
		6759	Other military bases and reservations, NEC.			Incl. 919 and 929			
68	Educational services.	681	Nursery, primary, and secondary education.			6811	Nursery schools.	Incl. 821	A ↑
						6812	Primary (elementary) schools. <sup>5</sup>	Incl. 821	
				6813	Secondary schools. <sup>6</sup>	Incl. 821			
		682	University, college, junior college, and professional school education.	6821	Universities and colleges.	Incl. 8221	A ↑		
				6822	Junior colleges.	Incl. 8222			
				6823	Professional schools.	Incl. 8221			
		683	Special training and schooling.	6831	Vocational or trade schools.	8242	A ↑		
				6832	Business and stenographic schools.	Incl. 8299			
				6833	Barber and beauty schools.	Incl. 723 and 724			
				6834	Art and music schools.	Incl. 8299			
				6835	Dancing schools.	Incl. 7911			
				6836	Driving schools.	Incl. 8299			
				6837	Correspondence schools.	8241			
				6839	Other special training and schooling, NEC.	Incl. 8299		A ↓	

**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

Code	Category	Code	Category	Code	Category	SIC Reference <sup>1</sup>	L. C.
69	Miscellaneous services.	691	Religious activities. <sup>7</sup>	6911	Churches, synagogues, and temples.	Incl. 866	
				6919	Other religious activities, NEC.	Incl. 866	
		692	Welfare and charitable services.	6920	Welfare and charitable services.	867	
		699	Other miscellaneous services, NEC.	6991	Business associations.	861	
				6992	Professional membership organizations.	862	
				6993	Labor unions and similar labor organizations.	863	
				6994	Civic, social, and fraternal associations.	864	
				6999	Other miscellaneous services, NEC.	—	

**FOOTNOTES**

<sup>1</sup> The SIC codes are listed for purposes of reference. They are the codes in the SIC system that most nearly correspond to the 4-digit land use activity indicated. (See ch. III, sec. A3, "The Use of Standard Industrial Classification Nomenclature.") A dash indicates that there is no corresponding SIC code.

<sup>2</sup> Code 637—"Warehousing and storage services" include only those facilities that are used by or are open to the public. When warehousing and storage is functionally and organizationally linked to another activity (e.g., a general contractor or an apparel manufacturer), the facilities are identified and coded the same as the parent activity and with a code of 4 (warehousing and storage) in the auxiliary position. For example, 2310-4 is a warehouse and storage area of a manufacturer of men's, youths', and boys' suits, coats, and overcoats.

<sup>3</sup> Code 6710—"Executive, legislative, and judicial functions" include only the central and administrative office activities of the agencies or special authorities involved in government functions, including the

legislature and courts. All operational activities (e.g., shipbuilding, schools, or hospitals) should be identified separately under the respective activity codes.

<sup>4</sup> Code 675—"Military bases and reservations" include the installations used by both the active military as well as the Reserves and the National Guard.

<sup>5</sup> Code 6812—"Primary (elementary) schools" may or may not include a kindergarten, but they do include grades 1 through 6.

<sup>6</sup> Code 6813—"Secondary schools" are schools that include grades 7 through 12, popularly known as junior and senior high schools.

<sup>7</sup> Code 691—"Religious activities" include only those places operated for worship or for the promotion of religious activities. Activities maintained by the religious organizations (e.g., schools, hospitals, publishing houses, etc.) should be identified separately under the respective activity codes.

71	Cultural activities and nature exhibitions.	711	Cultural activities.	7111	Libraries.	823	
				7112	Museums.	Incl. 841	
				7113	Art galleries. <sup>3</sup>	Incl. 841	
				7119	Other cultural activities, NEC.	—	
		712	Nature exhibitions.	7121	Planetaria.	—	
				7122	Aquariums.	Incl. 8421	
				7123	Botanical gardens and arboreta.	Incl. 842	
				7124	Zoos.	—	
				7129	Other nature exhibitions, NEC.	—	
		719	Other cultural activities and nature exhibitions, NEC.	7191	Historic and monument sites. <sup>3</sup>	—	
				7199	Other cultural activities and nature exhibitions, NEC.	—	
72	Public assembly.	721	Entertainment assembly.	7211	Amphitheaters.	—	
				7212	Motion picture theaters.	Incl. 7831	
				7213	Drive-in movies.	Incl. 7831	
				7214	Legitimate theaters.	—	
				7219	Other entertainment assembly, NEC.	—	
		722	Sports assembly. <sup>4</sup>	7221	Stadiums. <sup>4</sup>	Incl. 7941	
				7222	Arenas and field houses.	—	
				7223	Race tracks. <sup>4</sup>	Incl. 7948	
				7229	Other sports assembly, NEC.	—	
		723	Public assembly, miscellaneous purposes.	7231	Auditoriums.	—	
				7232	Exhibition halls.	—	
				7239	Other miscellaneous assembly, NEC.	—	
		729	Other public assembly, NEC.	7290	Other public assembly, NEC.	—	
73	Amusements.	731	Fairgrounds and amusement parks.	7311	Fairgrounds.	Incl. 7949	
				7312	Amusement parks.	Incl. 7949	

\* Fairgrounds are Class B Land; when used for automobile and motorcycle racing, Fairgrounds are Class C Land.

**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

Code	Category	Code	Category	Code	Category	SIC Reference <sup>1</sup>	Land Class
73	Amusements—Continued	739	Other amusements, NEC.	7391	Penny arcades.	Incl. 7949	B
				7392	Miniature golf.	Incl. 7949	A
				7393	Golf driving ranges.	Incl. 7949	
				7394	Go-cart tracks.	Incl. 7949	
				7399	Other amusements, NEC.	Incl. 7949	
74	Recreational activities.	741	Sports activities.	7411	Golf courses (without country club).	7942	
				7412	Golf courses (with country club).	7947	
				7413	Tennis courts.	—	
				7414	Ice skating.	Incl. 7945	
				7415	Roller skating.	Incl. 7945	
				7416	Riding stables.	—	
				7417	Bowling.	Incl. 7931	
				7418	Skiing and tobogganing.	—	
				7419	Other sports activities, NEC.	—	
		742	Playgrounds and athletic areas.	7421	Play lots or tot lots. <sup>7</sup>	—	
				7422	Playgrounds. <sup>8</sup>	—	
				7423	Playfields or athletic fields. <sup>9</sup>	—	
				7424	Recreation centers (general). <sup>10</sup>	—	
				7425	Gymnasiums and athletic clubs.	Incl. 7949	
				7429	Other playground and athletic areas, NEC.	—	
		743	Swimming areas.	7431	Swimming beaches. <sup>11</sup>	—	
				7432	Swimming pools. <sup>12</sup>	7944	
		744	Marinas. <sup>13</sup>	7441	Yachting clubs.	Incl. 7949	
				7442	Boat rentals and boat access sites.	—	
				7449	Other marinas, NEC.	—	
		749	Other recreation, NEC.	7491	Camping and picnicing areas. <sup>14</sup>	—	
				7499	Other recreation, NEC.	—	
75	Resorts and group camps.	751	Resorts.	7511	General resorts. <sup>15</sup>	—	
				7512	Dude ranches.	Incl. 7032	
				7513	Health resorts.	Incl. 8092	
				7514	Ski resorts.	—	
				7515	Hunting and fishing clubs. <sup>16</sup>	Incl. 7032	
				7519	Other resorts, NEC.	—	
		752	Group or organized camps.	7520	Group or organized camps. <sup>17</sup>	Incl. 7032	✓
76	Parks.	761	Parks—general recreation.	7610	Parks—general recreation. <sup>18</sup>	—	B
		762	Parks—leisure and ornamental.	7620	Parks—leisure and ornamental. <sup>19</sup>	—	A
		769	Other parks, NEC.	7690	Other parks, NEC.	—	B
79	Other cultural, entertainment, and recreational activities, NEC.	790	Other cultural, entertainment, and recreational activities, NEC.	7900	Other cultural, entertainment, and recreational activities, NEC.	—	B

**FOOTNOTES**

<sup>1</sup> The SIC codes are listed for purposes of reference. They are the codes in the SIC system that most nearly correspond to the 4-digit land use activity indicated. (See ch. III, sec. A3, "The Use of Standard Industrial Classification Nomenclature.") A dash indicates that there is no corresponding SIC code.

<sup>2</sup> Code 7113—"Art galleries" do not include those galleries that sell art objects commercially. Commercial sales are coded 5999, "Other retail trade, NEC."

<sup>3</sup> Code 7191—"Historic and monument sites" include those locations set aside for no other purpose than to commemorate an historical event, activity, or person.

<sup>4</sup> Code 722—"Sports assembly" includes only the public assembly areas used for nonparticipating sports.

<sup>5</sup> Code 7221—"Stadiums" include those used for individual sports, e.g., baseball or football, as well as those used for several sports activities.

<sup>6</sup> Code 7223—"Race tracks" include those used for individual racing activities, e.g., horse racing and automobile racing, as well as those used for several racing activities.

<sup>7</sup> Code 7421—"Play lots or tot lots" are small areas developed especially for preschool or elementary school aged children. They may

contain such facilities as sand boxes, slides, teeters, swings, climbing apparatus, etc. They are identified and coded only when found as a separate activity and not subsidiary to or serving another activity (e.g., apartment house or playground).

<sup>8</sup> Code 7422—"Playgrounds" are areas that have been developed for active play and recreation. They are identified and coded only when found as a separate activity and not subsidiary to or serving another activity (e.g., a school).

<sup>9</sup> Code 7423—"Playfields or athletic fields" contain a playground as well as a field(s) or court(s) for competitive sports (e.g., baseball, football, or tennis). Bleachers or grandstands may be provided. They are identified and coded only when found as a separate activity and not subsidiary to or serving another activity (e.g., a school).

<sup>10</sup> Code 7424—"Recreation centers (general)" include diversified recreation for a wide variety of activities for all ages and interests. The recreation centers may contain, but are not limited to a gymnasium, social or play rooms, game rooms, arts and craft shops, etc.

<sup>11</sup> Code 7431—"Swimming beaches" are beach areas that have been set aside specifically for the purpose of swimming. They are identified only when they are not a part of a larger activity (e.g., a park).

<sup>12</sup> Code 7432—"Swimming pools" are separately identified if they are

Footnotes continued on following page.

## B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued

independent of other functions (e.g., code 72, "Public assembly" or code 11, "Household units"). They may be indoor or outdoor pools.

<sup>15</sup> Code 744—"Marinas" include marine terminals and associated areas that are primarily for recreational marine craft. The sale and repair of recreational marine craft is coded 5591, "Marine craft and accessories—retail" and code 3443, "Ship and boat building and repairing," respectively.

<sup>16</sup> Code 7491—"Camping and picnicing areas" are separately identified if they are not a part of a larger activity (e.g., a park).

<sup>17</sup> Code 7511—"General resorts" have rooms for 20 or more persons and have provision for at least 2 types of recreational activities, excluding lawn games, children's playgrounds, and swimming pools.

<sup>18</sup> Code 7515—"Hunting and fishing clubs" include areas on which artificially propagated game or fish are released for purposes of hunting or fishing. If there are other uses made of the property (e.g., agricultural use), these "other" uses should take priority in identifying the activity of the parcel.

<sup>19</sup> Code 7520—"Group or organized camps" include general camps for children, as well as Boy Scout and Girl Scout camps.

<sup>20</sup> Code 7610—"Parks—general recreation" may include, but are not limited to, picnic areas, bathing beaches, playfields, hiking trails, camping grounds, and other manmade recreation facilities.

<sup>21</sup> Code 7620—"Parks—leisure and ornamental" are largely for scenic or leisure purposes. They may contain beaches, children's play facilities, monuments, or statues.

Code	Category	Code	Category	Code	Category	SIC Reference <sup>1</sup>	Lat. Cla.
81	Agriculture. <sup>2</sup>	811	Farms (predominant crop, fibers). <sup>3</sup>	8111	Farms (predominant crop, cotton).	—	C
		8119	Farms (other type fiber crops).	8119	Farms (other type fiber crops).	—	
		812	Farms (predominant crop, cash grains). <sup>3</sup>	8120	Farms (predominant crop, cash grains).	—	
		813	Farms (field crops other than fiber or cash grain crops). <sup>3</sup>	8130	Farms (field crops other than fiber or cash grain crops).	—	
		814	Farms (predominant crop, fruits, tree nuts, or vegetables). <sup>3</sup>	8141	Farms (predominant crop, fruits).	—	
				8142	Farms (predominant crop, tree nuts).	—	
				8143	Farms (predominant crop, vegetables).	—	
		815	Farms (predominantly dairy products). <sup>3</sup>	8150	Farms (predominantly dairy products).	—	
		816	Farms and ranches (livestock other than dairy). <sup>3</sup>	8161	Farms and ranches (predominantly cattle).	—	
				8162	Farms and ranches (predominantly hog).	—	
				8163	Farms and ranches (predominantly sheep).	—	
				8164	Farms and ranches (predominantly goat).	—	
				8169	Farms and ranches (other livestock), NEC.	—	
		817	Farms (predominantly poultry). <sup>3</sup>	8170	Farms (predominantly poultry).	—	
		818	Farms (general—no predominance). <sup>3</sup>	8180	Farms (general—no predominance).	—	
		819	Other agriculture and related activities, NEC.	8191	Range and grassland pastures (not farm or ranch). <sup>4</sup>	—	
				8192	Horticultural specialties.	0192	
				8193	Apiary farms.	Incl. 0193	
				8194	Farms or ranches (predominantly horse raising).	Incl. 0193	
				8199	Other agriculture and related activities, NEC.	—	
82	Agricultural related activities.	821	Agricultural processing. <sup>5</sup>	8211	Cotton ginning and compressing.	0712	
				8212	Grist milling services.	0713	
				8213	Corn shelling, hay baling, and threshing services.	0714	
				8214	Contract sorting, grading, and packing services (fruits and vegetables).	0715	
				8219	Other agricultural processing services, NEC.	0719	
		822	Animal husbandry services.	8221	Veterinarian services.	Incl. 0722	
				8222	Animal hospital services.	Incl. 0722	
				8223	Poultry hatchery services.	0723	
				8229	Other animal husbandry services, NEC.	0729	C

**B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued**

<i>Code</i>	<i>Category</i>	<i>Code</i>	<i>Category</i>	<i>Code</i>	<i>Category</i>	<i>SIC Reference</i> <sup>1</sup>	<i>Land Class</i>
82	Agricultural related activities—Continued	829	Other agricultural related activities, NEC.	8291	Horticultural services.	0731	C
				8299	Other agricultural related activities, NEC.	—	
83	Forestry activities and related services. <sup>4</sup>	831	Commercial forestry production. <sup>7</sup>	8311	Timber production—predominantly for pulp wood.	—	
				8312	Timber production—predominantly for saw logs.	—	
				8313	Timber production—predominantly for veneer logs.	—	
				8314	Timber production—mixed uses.	—	
				8315	Tree products production—predominantly gum extracting (except pine gum) and bark.	0842	
				8316	Tree products production—predominantly pine gum extraction.	0843	
				8317	Timber and tree products production—mixed uses.	—	
				8319	Other commercial forestry production, NEC.	—	
		832	Forestry services.	8321	Forest nurseries.	0822	
				8329	Other forestry services, NEC.	0851	
		839	Other forestry activities and related services, NEC.	8390	Other forestry activities and related services, NEC.	—	
84	Fishing activities and related services.	841	Fisheries and marine products. <sup>4</sup>	8411	Finfish fisheries.	0912	
				8412	Shellfish fisheries.	0913	
				8419	Other fisheries and marine products, NEC.	0914 and 0919	
		842	Fishery services.	8421	Fish hatcheries.	Incl. 0989	
				8429	Other fishery services, NEC.	Incl. 0989	
		849	Other fishery activities and related services, NEC.	8490	Other fishery activities and related services, NEC.	—	
85	Mining activities and related services. <sup>8</sup>	851	Metal ore mining.	8511	Iron ore-mining.	101	
				8512	Copper ore-mining.	102	
				8513	Lead and zinc ore-mining.	103	
				8514	Gold and silver ore-mining.	104	
				8515	Bauxite and other aluminum ore-mining.	105	
				8516	Ferroalloy ore (except vanadium)—mining.	106	
				8519	Other metal ore mining, NEC.	109	
		852	Coal mining.	8521	Anthracite coal-mining.	111	
				8522	Bituminous coal-mining.	1211	
				8523	Lignite coal-mining.	1212	
		853	Crude petroleum and natural gas.	8530	Crude petroleum and natural gas.	131	
		854	Mining and quarrying of non-metallic minerals (except fuels).	8541	Dimension stone.	141	
				8542	Crushed and broken stone (including riprap)—quarrying.	142	
				8543	Sand and gravel—quarrying.	144	
				8544	Clay, ceramic, and refractory minerals—mining.	145	
				8545	Chemical and fertilizers (mineral)—mining.	147	
				8549	Other mining and quarrying of non-metallic minerals (except fuels), NEC.	148	
		855	Mining services.	8551	Metal mining-services.	108	
				8552	Coal mining-services.	1112 and 1213	
				8553	Crude petroleum and gas field-services.	138	
				8554	Nonmetallic mining (except fuel)—services.	148	
				8559	Other mining services, NEC.	—	
89	Other resource production and extraction, NEC.	890	Other resource production and extraction, NEC.	8900	Other resource production and extraction, NEC.	—	C

# B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued

## FOOTNOTES

<sup>1</sup> The SIC codes are listed for purposes of reference. They are the codes in the SIC system that most nearly correspond to the 4-digit land use activity indicated. (See ch. III, sec. A3, "The Use of Standard Industrial Classification Nomenclature.") A dash indicates that there is no corresponding SIC code.

<sup>2</sup> Code 81—"Agriculture." A parcel of land is considered to be in agricultural use if 10 or more acres are under cultivation, in tree or bush crops, or are used for livestock or poultry purposes. The 10 acres may include the area of the residence, if there is one, and the immediate associated area surrounding the residence.

<sup>3</sup> A farm may consist of several ownership or rented parcels of land that are noncontiguous. However, each parcel should be linked together as one "farm management unit," and identified by only one 3- or 4-digit category, e.g., code 8120, "Farms (predominant crops, cash grains)."

Using the "Farm use" categories in app. 2 of this report, farm (i.e., the farm management units) are to be classified by the most predominant use made of the land (the farm use taking up the greatest percentage of farm area) excluding the areas used by farm residences and associated buildings, nonresident farm buildings, areas in feed crops, and grazed and nongrazed forested areas. Exceptions to this rule are:

a. If 50 percent or more of the value of the farm products sold in the previous year came from the sale of dairy products, or the sale of cows and calves, the farm is identified as "Farm (predominantly dairy products)," code 8150.

b. If 50 percent or more of the value of the farm products sold in the previous year came from the sale of livestock, wool, or mohair, the farm is identified as "Farms and ranches (livestock, other than dairy)," code 816.

c. If 50 percent or more of the value of the farm products sold in the previous year came from the sale of poultry and eggs, the farm is identified as "Farms (predominantly poultry)," code 8170.

d. If the percentage of dairy, livestock, and poultry products sold in the previous years, and if there are 3 or more "Farm uses" (e.g., corn crop, cotton crop, etc.) within a farm, none of which takes up 25 percent of the total farm area (excluding those areas referred to above), the farm is identified as "Farms (general—no predominance)," code 8180.

<sup>4</sup> Code 8191—"Range and grass land pastures (not farm or ranch)" include grasslands used for grazing purposes that are not a part of a

farm or ranch. These areas are usually part of the public domain in which grazing has been permitted.

<sup>5</sup> Code 821—"Agricultural processing" includes only preliminary processing of agricultural products. Any extensive processing, packing, canning, or manufacturing is coded 21, "Food and kindred products—manufacturing."

<sup>6</sup> Code 83—"Forestry activities and related services." The categories in this classification are based upon primary use of the land. It is recognized that other activities, e.g., recreation or the grazing of livestock may also be taking place within these forested areas. However, these types of activities are considered secondary in nature and not coded. Activities such as mining (code 85), permanent camping areas (code 7491), and logging camps (code 2410), located within the forested areas should be separately identified.

<sup>7</sup> Code 831—"Commercial forestry production" includes those forested areas not on the farms or ranches that are being managed or have been set aside to grow tree crops for "industrial wood" or to obtain tree products such as sap, bark, or seeds. "Industrial wood" includes commercial roundwood products, such as saw logs and pulpwood, but excludes fuel wood and fence posts. "Forest reserves," i.e., areas withdrawn from any commercial use of the trees, are coded 921. "Parks," e.g., national or State parks, are also a type of forest reserve, but because of their designation for recreational activity, they should be identified as "Parks" under code 76. Forested areas not on farms, ranches, or estates with no commercial use made of the trees are coded 922, "Nonreserve forests (undeveloped)."

<sup>8</sup> Code 841—"Fisheries and marine products" include those establishments primarily engaged in commercial fishing, the catching or taking of shellfish, or the gathering of seaweed, sponges, turtles, frogs, etc. These activities may include some preliminary processing, e.g., salting. However, any extensive processing, packing, canning, or manufacturing of these products should be coded under "Food and kindred products—manufacturing," code 21. These categories also include the docking facilities and their associated areas when these facilities are an integral part of a single fishery operation. When docking facilities serve several separate fishery establishments, they are coded 4414, "Marine terminals (predominantly fishing vessels)."

<sup>9</sup> Code 85—"Mining activities and related services" include those surface areas being used for mining or drilling purposes. The process may be tunnel excavation, strip mining, quarrying, or by drilling. These categories also include those areas where preliminary processing of raw materials (e.g., washing, crushing, screening, etc.) are taking place if these processes are an integral part of the mining operation.

Code	Category	Code	Category	Code	Category	SIC Reference <sup>1</sup>	Land Class
91	Undeveloped and unused land area (excluding noncommercial forest development).	910	Undeveloped and unused land area (excluding noncommercial forest development).	9100	Undeveloped and unused land area (excluding noncommercial forest development). <sup>2</sup>	—	U
92	Noncommercial forest development.	921	Forest reserves. <sup>3</sup>	9211	Forest reserves (wilderness areas).	—	A
				9212	Forest reserves (wildlife refuges).	—	A
				9219	Other forest reserves. NEC.	—	A
		922	Nonreserve forests (undeveloped).	9220	Nonreserve forests (undeveloped). <sup>4</sup>	—	B
93	Water areas.	931	Rivers, streams, or creeks.	9310	Rivers, streams, or creeks.	—	U
		932	Lakes.	9320	Lakes. <sup>5</sup>	—	U
		933	Bays or lagoons.	9330	Bays or lagoons.	—	U
		934	Oceans and seas.	9340	Oceans and seas.	—	U
		939	Other water areas. NEC.	9390	Other water areas. NEC.	—	U
94	Vacant floor area.	940	Vacant floor area.	9400	Vacant floor area.	—	U
95	Under construction.	951	Under construction (residential).	9510	Under construction (residential). <sup>6</sup>	—	U
		952	Under construction (nonresidential).	9520	Under construction (nonresidential). <sup>7</sup>	—	U
99	Other undeveloped land and water areas. NEC.	990	Other undeveloped land and water areas. NEC.	9900	Other undeveloped land and water areas. NEC.	—	U

See footnotes on following page.

## B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES—TWO-, THREE-, AND FOUR-DIGIT LEVELS—Continued

### FOOTNOTES

<sup>1</sup> The SIC codes are listed for purposes of reference. They are the codes in the SIC system that most nearly correspond to the 4-digit land use activity indicated. (See ch. III, sec. A3, "The Use of Standard Industrial Classification Nomenclature.") A dash indicates that there is no corresponding SIC code.

<sup>2</sup> Code 9100—"Undeveloped and unused land area (excluding non-commercial forest development)" identifies those parcels of land that appear to be undeveloped or if previously developed, are presently vacant and unused. This category includes such areas as vacant lands that once were farms, as well as vacant parcels where structures have been demolished. Vacant nonresidential buildings are coded 9400, "Vacant floor area."

<sup>3</sup> Code 921—"Forest reserves" are forested areas withdrawn from commercial utilization, and which are reserved through statute or administrative regulation for specific conservation purposes. Forested areas designated as park sites may also be restricted from commercial forestry production, but because of their designation for recreational activity they should be identified and coded as "Parks" (code 76).

<sup>4</sup> Code 9220—"Nonreserve forests (undeveloped)" are major forested areas not on a farm, ranch, or large estate with no commercial use made of the trees. It is recognized that other activities such as recreation or the grazing of livestock may also be taking place within these forested areas. However, these types of activities are considered secondary in nature and not coded. Activities such as mining (code 85), permanent camping areas (code 7491), and logging camps (code 2410), located within these forested areas should be separately identified.

<sup>5</sup> Code 9320—"Lakes" include permanent lakes (natural or manmade) with a minimum size of 1 acre. Impounded surface water areas used for storage should be identified as "Water storage," code 4833.

<sup>6</sup> Code 9510—"Residential facilities under construction are considered to be completed when all exterior windows and doors are installed and the usable floors are in place. If construction has not reached this point, the parcel should be identified as "Under construction (residential)," code 9510.

<sup>7</sup> Code 9520—"Under construction (nonresidential)" is used only if there is no means of identifying the activity or activities that will occupy the structure when it is completed.

## TITLE 35: ENVIRONMENTAL PROTECTION

### SUBTITLE H: NOISE

#### CHAPTER I: POLLUTION CONTROL BOARD

##### PART 902

#### SOUND EMISSION STANDARDS AND LIMITATIONS FOR MOTOR VEHICLES

##### SUBPART A: EQUIPMENT STANDARDS APPLICABLE TO ALL MOTOR VEHICLES

Section 902.101	Exhaust System
902.102	Tires

##### 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
902.121	Standards Applicable to Motor Vehicles with GVW in Excess of 8,000 Pounds
902.122	Standards Applicable to Motorcycles and Motor Driven Cycles
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
902.124	Horns and Other Warning Devices
902.125	Tire Noise

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

Section 902.140	Exceptions
902.141	Compliance Dates

##### Appendix A Old Rule Numbers Referenced

*AUTHORITY: Implementing Section 25 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1981, ch. 111 1/2, pars. 1025 and 1027).*

*SOURCE: Originally filed as Part 3 of Chapter 8: Noise Pollution, effective May 31, 1977; codified at 7 Ill. Reg. 13648.*

##### SUBPART A: EQUIPMENT STANDARDS APPLICABLE TO ALL 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:

- In constant operation and properly maintained to prevent any excessive or unusual noise;
- Free from defects which affect sound reduction; and
- 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

- 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.
- 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:
  - 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;
  - 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

- This rule shall apply to motor vehicles with a gross vehicle weight in excess of 8,000 pounds, except passenger cars.
- 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:
  - 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;
  - 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.
  - 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 Sections 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 responding 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.

### APPENDIX A OLD RULE NUMBERS REFERENCED

The following table is provided to aid in referencing old Board rule numbers to section numbers pursuant to codification.

Old Part 3 of Chapter 8	35 Ill. Adm. Code Part 902
Rule 301 .....	Section 902.101
Rule 302 .....	Section 902.102
Rule 310 .....	Section 902.120
Rule 311 .....	Section 902.121
Rule 312 .....	Section 902.122
Rule 313 .....	Section 902.123
Rule 314 .....	Section 902.124
Rule 315 .....	Section 902.125
Rule 320 .....	Section 902.140
Rule 321 .....	Section 902.141

## TITLE 35: ENVIRONMENTAL PROTECTION

### SUBTITLE H: NOISE

#### CHAPTER I: POLLUTION CONTROL BOARD

##### PART 903

#### RULES AND REGULATIONS FOR THE CONTROL OF NOISE FROM MOTOR RACING FACILITIES

##### SUBPART A: OPERATIONAL PROCEDURES AND RACING WITHOUT MUFFLERS

Section 903.101	Operational Procedures
903.102	Racing Vehicles without Mufflers

##### SUBPART B: DRAG RACING FACILITIES

Section 903.120	Muffler Requirements
903.121	Sound Level Measurement Requirements
903.122	Sound Emission Limits

##### SUBPART C: OVAL RACING FACILITIES

Section 903.140	Muffler Requirements
903.141	Sound Level Measurement Requirements
903.142	Sound Emission Limits

##### SUBPART D: SPORTS CAR RACING FACILITIES

Section 903.160	Muffler Requirements
903.161	Sound Level Measurement Requirements
903.162	Sound Emission Limits

##### SUBPART E: MOTORCYCLE RACING FACILITIES

Section 903.180	Muffler Requirements
903.181	Sound Level Measurement Requirements
903.182	Sound Emission Limits

##### SUBPART F: EXCEPTIONS AND COMPLIANCE DATES FOR PART 903

Section 903.200	Exceptions
903.201	Compliance Dates for Part 903

##### Appendix A Old Rule Numbers Referenced

**AUTHORITY:** Implementing Section 25 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1981, ch. 111 1/2, pars. 1025 and 1027).

**SOURCE:** Adopted at 2 Ill. Reg. 27, p. 233, effective June 26, 1978; codified at 7 Ill. Reg. 13651.

##### SUBPART A: OPERATIONAL PROCEDURES AND RACING WITHOUT MUFFLERS

###### Section 903.101 Operational Procedures

The owner or operator of a motor racing facility shall reduce noise emissions from the public address system by using noise abatement methods and operational changes — for example, by reducing the volume of the loudspeaker system, by increasing the number of speakers so that the volume of individual speakers can be further reduced, and by relocating and redirecting the speakers away from residential property.

###### Section 903.102 Racing Vehicles without Mufflers

No person shall cause or allow the use or operation of any motor racing vehicle that does not require a muffler in accordance with this Part in any motor racing event started after 10:30 p.m. local time on any particular weekday or after 11:00 p.m. local time on any particular weekend day.

##### SUBPART B: DRAG RACING FACILITIES

###### Section 903.120 Muffler Requirements

- a) No person shall cause or allow the use or operation of any drag racing vehicle equipped with a normally aspirated gasoline burning engine at a drag racing facility unless such drag racing vehicle is equipped with a well-maintained and properly installed muffler. Except for any motorcycle used as a drag racing vehicle, all mufflers required in accordance with this subparagraph (a) shall meet the requirements specified in subparagraph (b).
- b) Except for any motorcycle used as a drag racing vehicle, all mufflers required in accordance with subparagraph (a) shall have noise reducing characteristics which will produce a reduction in total vehicle noise of at least the amount listed in the following table when such drag racing vehicle is operated in a manner simulating wide-open throttle competition. Such noise reduction shall be determined by using measurement procedures specified in 35 Ill. Adm. Code 900.103.

###### Total Vehicle Noise Reduction Requirements for Mufflers Installed on Drag Racing Vehicles (Except Motorcycles) During Wide-open Throttle Acceleration Run

Type of Drag Racing Vehicle	Date	Total Vehicle Noise Reduction, dB
Group A	On and after March 15, 1979	Muffler only
Group A	On and after March 15, 1980	10 dB
Group A	On and after March 15, 1983	14 dB
Group B	On and after March 15, 1980	Muffler only
Group B	On and after March 15, 1981	10 dB
Group B	On and after March 15, 1983	14 dB
Group C	On and after March 15, 1981	Muffler only
Group C	On and after March 15, 1982	10 dB
Group C	On and after March 15, 1983	14 dB

- 1) Group A includes all drag racing vehicles in the National Hot Rod Association (NHRA) classes of ET Bracket, Stock and Super Stock; the International Hot Rod Association (IHRA) classes of ET Bracket, Stock and Super Stock; the American Hot Rod Association (AHRA) classes of Selectra, Stock, Super Street and Super Stock; and all other similar drag racing vehicles.
- 2) Group B includes all drag racing vehicles in the NHRA class of Modified; the IHRA class of Super Modified; the AHRA class of Modified/Street; and all other similar drag racing vehicles.
- 3) Group C includes all drag racing vehicles in the NHRA classes of Competition and Pro Stock; the IHRA classes of Super Comp and Pro Stock; the

AHRA classes of Top Competition and Pro Stock; and all other similar drag racing vehicles.

#### Section 903.121 Sound Level Measurement Requirement

- a) The sound emissions from each drag racing vehicle required to have a muffler in accordance with Section 903.120 must be measured before competing in terms of A-weighted sound levels using sound level meters in conformance with American National Standards Institute (ANSI) Standards §1.4 Type 1 or Type 2 requirements and using procedures specified in 35 Ill. Adm. Code 900.103. All sound level measurements must be made with the microphone one-half meter from the exhaust outlet with the engine gear-box in neutral at an engine speed of 4000 rpm. It shall be the responsibility of the drag racing facility's owners or operators, or designated agent, to measure and record the required sound level data. Upon reasonable request, the owner or operator shall make such recorded sound level data available to the Agency. The owner and operator must keep such recorded sound level data for the duration of the racing season.
- b) The Agency shall publish techniques for determining compliance with Section 903.120 under static test conditions.
- c) On and after March 15, 1979, before any motorcycle racing vehicle required to have a muffler in accordance with Section 903.120 competes at a drag racing facility, the noise emissions from such motorcycle racing vehicle must be measured in terms of A-weighted sound levels using sound level meters in conformance with ANSI Standards §1.4 Type 1 or Type 2 requirements and using procedures specified in 35 Ill. Adm. Code 900.103. The microphone shall be located one-half meter from and in the horizontal plane of the rearmost exhaust outlet at an angle of 45 degrees behind the exhaust outlet and from the normal line of travel of the motorcycle. The engine shall be run with the gear-box in neutral at an engine speed equal to one-half of the manufacturer's-recommended-maximum-engine-speed. If no manufacturer's-recommended-maximum-engine-speed is published for a particular motorcycle, then an engine speed equal to 60 percent of the engine speed at which maximum horsepower is developed shall be used. If no manufacturer's-recommended-maximum-engine-speed is published, then the engine speed during the sound level measurement shall be calculated from either of the following formulae:

Engine Speed =  $306,000$   
stroke in millimeters

OR

Engine Speed =  $12,000$   
stroke in inches

#### Section 903.122 Sound Emission Limits

On and after March 15, 1979, no person shall cause or allow the use or operation of any motorcycle racing vehicle required to have a muffler in accordance with Section 903.120 whose sound emissions exceed 115 db(A) when measured in accordance with Section 903.121 and when measured one-half meter from the rearmost exhaust outlet.

#### SUBPART C: OVAL RACING FACILITIES

##### Section 903.140 Muffler Requirements

- a) Except as provided in subparagraph (b), no person shall cause or allow the use or operation of any oval racing vehicle at an oval racing facility unless such oval racing

vehicle is equipped with a well-maintained and properly installed muffler. Except for any motorcycle used as an oval racing vehicle, all mufflers required in accordance with this rule shall meet the requirements specified in subparagraph (c).

- b) The following oval racing vehicles shall not require a muffler in accordance with subparagraph (a):
  - 1) Sprint racing vehicles;
  - 2) Midget racing vehicles;
  - 3) Supercharged oval racing vehicles.
- c) Except for any motorcycle used as an oval racing vehicle, all mufflers required in accordance with subparagraph (a) shall have noise reducing characteristics which will produce a reduction in total vehicle noise of at least the amount listed in the following table when such oval racing vehicle is operated in a manner simulating wide-open throttle competition. Such noise reduction shall be determined by using measurement procedures specified in 35 Ill. Adm. Code 900.103.

Wide-open Throttle Noise Reduction Requirements  
for Mufflers Installed on Oval Racing Vehicles  
(Except Motorcycles)

Date	Muffler Noise Reduction Requirement, dB
On and after March 15, 1979	Muffler only
On and after March 15, 1980	10 dB
On and after March 15, 1982	16 dB

#### Section 903.141 Sound Level Measurement Requirements

- a) The requirements for measuring noise emissions from oval racing vehicles, other than motorcycles used as oval racing vehicles, shall be identical to those specified under Section 903.121(a) for drag racing vehicles.
- b) The Agency shall publish techniques for determining compliance with Section 903.140 under static test conditions.
- c) The requirements for measuring noise emissions from motorcycle racing vehicles competing at oval racing facilities shall be identical to those specified under Section 903.121(c) for motorcycle racing vehicles competing at drag racing facilities.

#### Section 903.142 Sound Emission Limits

No person shall cause or allow the use or operation of any motorcycle racing vehicle required to have a muffler in accordance with Section 903.140 whose sound emissions exceed 115 db(A) when measured in accordance with Section 903.141 and when measured one-half meter from the rearmost exhaust outlet.

#### SUBPART D: SPORTS CAR RACING FACILITIES

##### Section 903.160 Muffler Requirements

- a) Except as provided in subparagraph (b), on and after March 15, 1979, no person shall cause or allow the use or operation of any sports car racing vehicle competing at a sports car racing facility unless such sports car racing vehicle is equipped with a well-maintained and properly installed muffler.
- b) The following sports car racing vehicles shall not require a muffler in accordance with subparagraph (a): all sports car racing vehicles which are supercharged.

## Section 903.161 Sound Level Measurement Requirements

During all qualifying runs, noise emissions from each sports car racing vehicle required to have a muffler in accordance with Section 903.160, must be measured in terms of A-weighted sound levels using sound level meters in conformance with ANSI Standards § 1.4 Type 1 or Type 2 requirements and using procedures specified in 35 Ill. Adm. Code 900.103. All measurements must consistently be made at the same measurement site; provided, however, that such measurement site can be changed if necessitated by good faith circumstances making the use of the first measurement site impossible or impractical. It shall be the responsibility of the sports car racing facility's owners or operators, or designated agent, to measure and record the required sound level data. Upon reasonable request, the owner or operator shall make such recorded sound level data available to the Agency. The owner and operator must keep such recorded sound level data for the duration of the racing season.

## Section 903.162 Sound Emission Limits

No person shall cause or allow the use or operation of any sports car racing vehicle required to have a muffler in accordance with Section 903.160 whose sound emissions while accelerating, as measured in accordance with Section 903.161, exceed 105 dB(A) when measured 50 feet from the center of the lane of travel of such sports car racing vehicle while accelerating on the track.

## SUBPART E: MOTORCYCLE RACING FACILITIES

### Section 903.180 Muffler Requirements

- a) Except as provided in subparagraph (b), on and after March 15, 1979, no person shall cause or allow the use or operation of any motorcycle racing vehicle competing at a motorcycle racing facility unless such motorcycle racing vehicle is equipped with a well-maintained and properly installed muffler.
- b) The following motorcycle racing vehicles shall not require a muffler in accordance with subparagraph (a): supercharged motorcycle racing vehicles.

### Section 903.181 Sound Level Measurement Requirements

The requirements for measuring noise emissions from motorcycle racing vehicles competing at motorcycle racing facilities shall be identical to those specified under Section 903.121(c) for motorcycle racing vehicles competing at drag racing facilities.

### Section 903.182 Sound Emission Limits

No person shall cause or allow the use or operation of any motorcycle racing vehicle required to have a muffler in accordance with Section 903.180 whose sound emissions exceed 115 dB(A) when measured in accordance with Section 903.181 and when measured one-half meter from the rearmost exhaust outlet.

## SUBPART F: EXCEPTIONS AND COMPLIANCE DATES FOR PART 903

### Section 903.200 Exceptions

- a) Sections 903.120 through 903.182 shall not apply to any special-motor-racing-events, provided that not more than three special-motor-racing-events are conducted at any motor racing facility during any calendar year. The owner or operator of any motor racing facility which is conducting a special-motor-racing-event must previously notify the local public that a special-motor-racing-event will be conducted.
- b) Sections 903.120 through 903.182 shall not apply to motor racing facilities which conduct motor racing events on fewer than five days per calendar year.

- c) Sections 903.120 through 903.182 shall not apply to fairground motor racing facilities during motor racing events held in conjunction with a state or county fair.
- d) Sections 903.102 through 903.182 shall not apply if there are no residential dwelling units within two miles of such motor racing facility's racing surface.
- e) Sections 903.102 through 903.182 shall not apply to any motor racing facility whose sound emissions do not at any time exceed the background sound level by more than 7 dB(A) at any residential dwelling unit.
- f) Sections 903.102 through 903.182 shall not apply to any existing motor racing facility whose sound emissions do not at any time exceed the allowable octave band sound pressure levels specified in 35 Ill. Adm. Code 901.102(a) when measured at any point within any receiving Class A land.
- g) Sections 903.102 through 903.182 shall not apply to any new motor racing facility whose sound emissions do not exceed at any time during daytime hours the allowable octave band sound pressure levels specified in 35 Ill. Adm. Code 901.102(a) or at any time during the nighttime hours the allowable octave band sound pressure levels specified in 35 Ill. Adm. Code 901.102(b) when measured at any point within any receiving Class A land.

### Section 903.201 Compliance Dates for Part 903

- a) Every owner or operator of an existing motor racing facility shall comply with the requirements of this Part by September 24, 1978.
- b) Every owner or operator of a new motor racing facility shall comply with the requirements of this Part when motor racing activities commence at such new motor racing facility.

## APPENDIX A OLD RULE NUMBERS REFERENCED

The following table is provided to aid in referencing old Board rule numbers to section numbers pursuant to codification.

Old Part 4 of Chapter 8	35 Ill. Adm. Code Part 903
Rule 401 .....	Section 903.101
Rule 402 .....	Section 903.102
Rule 403 .....	Section 903.120
Rule 404 .....	Section 903.121
Rule 405 .....	Section 903.122
Rule 406 .....	Section 903.140
Rule 407 .....	Section 903.141
Rule 408 .....	Section 903.142
Rule 409 .....	Section 903.160
Rule 410 .....	Section 903.161
Rule 411 .....	Section 903.162
Rule 412 .....	Section 903.180
Rule 413 .....	Section 903.181
Rule 414 .....	Section 903.182
Rule 415 .....	Section 903.200
Rule 416 .....	Section 903.201

**TITLE 35: ENVIRONMENTAL PROTECTION  
SUBTITLE H: NOISE  
CHAPTER I: POLLUTION CONTROL BOARD**

**PART 905  
SOUND EMISSION STANDARDS AND LIMITATIONS  
FOR SNOWMOBILES**

Section	
905.101	Exhaust Systems
905.102	Noise Emission Standards
905.103	Certification Requirement for Registration of New Snowmobiles
905.104	Exemptions to Part 905
905.105	Compliance Dates for Part 905

**Appendix A Old Rule Numbers Referenced**

*AUTHORITY: Implementing Section 25 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1981, ch. 111 1/2, pars. 1025 and 1027).*

*SOURCE: Adopted at 5 Ill. Reg. 8533, effective August 10, 1981; codified at 7 Ill. Reg. 13654.*

**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 sound 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 cer-

tification 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.

**APPENDIX A  
OLD RULE NUMBERS REFERENCED**

The following table is provided to aid in referencing old Board rule numbers to section numbers pursuant to codification.

Old Part 6 of Chapter 8	35 Ill. Adm. Code Part 905
Rule 601 .....	Section 905.101
Rule 602 .....	Section 905.102
Rule 603 .....	Section 905.103
Rule 604 .....	Section 905.104
Rule 605 .....	Section 905.105



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**State of Illinois  
The Environmental Protection Agency**

**MEASUREMENT PROCEDURES  
FOR ENFORCEMENT OF  
NOISE POLLUTION CONTROL  
REGULATIONS  
(PART ~~901~~ 901)**

~~FEBRUARY~~

~~1986~~

SEE NEXT  
PAGE FOR  
1-22-87  
UPDATE







### ECONOMIC CONSIDERATIONS

Two economically-based arguments in opposition to the proposed amendments were reasserted in the public comments during the first notice period. These relate to the cost of replacing and/or adapting existing noise meters such that these can measure Leq, and added manpower needed to make noise measurements.

The Agency reasserted that the noise meters presently owned by the Agency, and presumably at least some of those owned by other entities who measure noise, are not equipped to measure Leq. Some confusion has existed throughout the record in this matter as to the costs which would be involved in adapting these meters to Leq measurement. The latest estimate is that the cost per meter would be approximately \$610 (PC #5, p. 14). The Board does not believe that this cost is prohibitive. Moreover, as existing meters require replacement, they would be expected to be replaced by Leq-capable meters anyway since these are the current standard of the industry. The Board also notes that the updated meters need be used only for enforcement, not for routine assessment.

The gathering of one-hour Leq data suitable for enforcement actions may, under some circumstances, require longer measurement times than required under the present rule. Thus, manpower needs may be larger. However, the Board believes that this is a small price to pay relative to the gains to be made with respect to strengthening the noise regulations both as to enforceability and compliance expectations.

### ORDER

The Board directs the Clerk to cause the following adopted final rules to be filed with the Secretary of State.

Title 35: Environmental Protection  
Subtitle H: Noise  
Chapter I: Pollution Control Board

#### Section 900.103 Measurement Procedures

- (a) No change
- (b) Procedures Applicable Only to 35 Ill. Adm. Code 901

All measurements and all Mmeasurement procedures to determine whether emissions of sound comply with 35 Ill. Adm. Code 901 shall be in substantial conformity with ANSI S1.6-1967, ANSI S1.4-1971 -- Type I Precision, ANSI S1.11-1966 and ANSI S1.13-1971 Field Method, and 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 of one

hour. All such measurements and measurement procedures shall correct or provide for the correction of such emissions for the presence of ambient noise as defined in ANSI S1.13-1971.

(c-e) No change

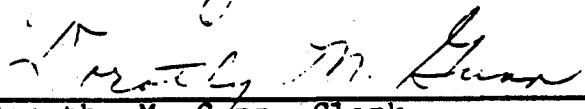
Section 901.104 IMPULSIVE SOUND

Except as elsewhere in this Part provided, no person shall cause or allow the emission of 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 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 such from property-line-noise-source.

IT IS SO ORDERED.

J. D. Dumelle and B. Forcade dissented.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Final Opinion and Order was adopted on the 3<sup>rd</sup> day of January, 1987, by a vote of 4-2.

  
\_\_\_\_\_  
Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Division of Land/Noise Pollution Control

**SUBTITLE H**  
**CHAPT. I**

Measurement Procedures for the Enforcement of Parts ~~1 and 2~~ <sup>901</sup> of **TITLE 35**  
~~Chapter 8~~ of the Illinois Pollution Control Board's Rules and  
Regulations (General Provisions and Sound Emission Standards and  
Limitations for Property-Line-Noise-Sources)

Statutory and Regulatory Authority: Ill. Rev. Stat. Ch. 111 1/2,  
§§ 1025 and 1027 (1989); ~~Rule 102 of Ch. 8~~, Illinois Pollution  
Control Board Rules and Regulations. **SECTION 900.103**

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1.0 GENERAL

**SECTION 900.103, TITLE 35, SUBTITLE H**

This Report, pursuant to ~~Rules 102(a) and 102(b), Chapter 9,~~ of the Noise Pollution Control Regulations, establishes: (1) the qualifications necessary for the Illinois Environmental Protection Agency personnel to conduct sound pressure level measurements, (2) the definitions necessary to supplement this Report, (3) the instrumentation to be used by the Illinois Environmental Protection Agency personnel conducting sound pressure level measurements and (4) the specific sound pressure level measurement techniques to be employed by the Illinois Environmental Protection Agency personnel conducting sound pressure level measurements. Such personnel qualifications, instrumentation and measurement techniques as more specifically set forth herein below, shall apply to the Illinois Environmental Protection Agency (Agency) personnel in determining whether a noise source is in compliance with ~~Parts 1 and 2 of~~ **900 + 901** ~~Chapter 9~~ of the Illinois Pollution Control Board's Rules and Regulations (Noise Regulations), but do not establish limits on sound.

2.0 PERSONNEL QUALIFICATIONS

Agency personnel conducting sound measurements shall have been trained and experienced in the current techniques and principles of sound measurement and in the selection and operation of sound measuring instrumentation.

3.0 INSTRUMENTATION

3.1 A sound level meter used alone or used in conjunction with an octave band or one-third octave band filter set shall conform with the following standards or subsequent revisions:

- (a) American National Standards Institute (ANSI) S1.4 - 1971  
Specification for Sound Level Meters, Type 1 Precision Sound Level Meter.
- (b) American National Standards Institute (ANSI) S1.11 - 1966  
Specifications for Octave Band Filter Sets, Class II; One-Half Octave Band Filter Sets, Class III; and One-Third Octave Band Filter Sets, Class III.

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- (c) American National Standards Institute (ANSI) S1.6 - 1967 Preferred Frequencies and Band Numbers for Acoustical Measurements.
  - (d) American National Standards Institute (ANSI) S1.8 - 1969 Preferred Reference Quantities for Acoustical Levels.
- 3.2 If a magnetic tape recorder, graphic level recorder or other indicating device is used, the system shall meet the requirements of the Society of Automotive Engineers (SAE) Recommended Practice J184a Qualifying a Sound Data Acquisition System.
  - 3.3 The laboratory calibration of instrumentation used for acoustic measurement shall be traceable to the National Bureau of Standards, and shall be performed no less than once every 12 months.
  - 3.4 An anemometer and compass or other suitable devices shall be used to measure wind speed and direction in accordance with the manufacturer's recommended procedures.
  - 3.5 A thermometer, suitable for measurement of ambient temperature, shall be used in accordance with the manufacturer's recommended procedures.
  - 3.6 A hygrometer, suitable for the measurement of relative humidity, shall be used in accordance with the manufacturer's recommended procedures.
  - 3.7 A barometer, suitable for the measurement of barometric pressure, shall be used in accordance with the manufacturer's recommended procedures.
  - 3.8 For outdoor measurements a suitable windscreen shall be attached to the microphone.
- 4.0 DEFINITIONS
  - 4.1 Angle of Incidence. The orientation of the microphone relative to the sound source. See Figure 1.
  - 4.2 Ambient. The all-encompassing sound associated with a given environment without the noise source of interest.

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- 4.3 Discrete Tone. A sound wave whose instantaneous sound pressure varies essentially as a simple sinusoidal function of time.<sup>1</sup>
- ~~4.4 Fluctuating Sound. A class of nonsteady sound whose sound pressure level varies over a range greater than 6 decibels with the "slow" meter characteristic, and where the meter indication does not equal the ambient level more than once during the period of observation.~~
- 4.5 Impulsive Sound. Sound characterized by brief excursions of sound pressure (acoustical impulses) above the ambient whose duration is less than one second.<sup>2</sup>
- ~~4.6 Intermittent Sound. A class of nonsteady sound where the meter indicates a sound pressure level equal to the ambient level two or more times during the period of observation. 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.~~
- 4.7 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.
- ~~4.8 Nonsteady Sound. A sound whose sound pressure level shifts significantly during the period of observation. Meter variations are greater than  $\pm 3$  dB using the "slow" meter characteristic.~~
- 4.9 Period of Observation. The time interval during which acoustical data are obtained. The period of observation is determined by the characteristics of the noise being measured and should 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.
- 4.10 Prominent Discrete Tone: Sound, having a one-third octave band sound pressure level which, when measured in a one-third octave

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1 Note that a discrete tone differs by definition from a prominent discrete tone.

2 Examples of impulsive sound sources are a drop forge hammer and explosive blasting.

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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:

- (a) 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;
- (b) 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;
- (c) 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.

4.11 Property-line-noise-source. Any equipment or facility, or combination thereof, which operates within any land used as specified by Rule 201 of the Noise Regulations. Such equipment or facility, or combination thereof, must be capable of emitting sound beyond the property line of the land on which operated.<sup>3</sup>

~~4.12 Quasi-Steady Sound. A train of two or more acoustical impulses.~~

4.13 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-link fences, fire hydrants, vegetation such as bushes and shrubs, or any similar object.

4.14 Sound Level. In decibels, a weighted sound pressure level determined by the use of metering characteristics and frequency

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<sup>3</sup> The property-line-noise-source is the equipment or facility or combination thereof that is emitting the sound to be measured. The surface of the property-line-noise-source is not necessarily on the property line unless they are contiguous.

~~<sup>4</sup> Examples of quasi-steady sound are riveting and a pneumatic hammer.~~



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weightings specified in ANSI, S1.4-1971 "Specification for Sound Level Meters".<sup>5</sup>

- 4.15 Sound Pressure Level. In decibels, 20 times the logarithm to the base 10 of the ratio of the magnitude of a particular sound pressure to the standard reference pressure. The standard reference pressure is 20 micronewtons per square meter.
- ~~4.16 Steady Sound. A sound whose sound pressure level remains essentially constant (that is, meter fluctuations are negligibly small) during the period of observation. Meter variations are less than or equal to  $\pm 3$  dB using the "slow" meter characteristic.~~

### 5.0 MEASUREMENT TECHNIQUES FOR PART 1

If sound pressure level measurements are obtained by Agency personnel to determine whether a noise source is in compliance with ~~Rule 102~~ of the Noise Regulations, the following measurement techniques shall be employed:<sup>6</sup>

**SECTION 900.102**

#### 5.1 Instrumentation Set Up:

- (a) Measurement instruments shall be set up in an area where the emitted sound may unreasonably interfere with the enjoyment of life or with any lawful business or activity. Other measurement locations may be used for investigatory purposes such as, but not limited to, the following: (1) determining

- 
- 5 The sound level may be obtained by the use of a metering characteristic and the weightings A, B, C (or other).

**SECTION 900.102**

- 6 Note that ~~Rule 102~~ prohibits noise that unreasonably interferes with the enjoyment of life or with any lawful business or activity, and ~~Rule 102~~ is not dependent upon utilization of specific numerical limits expressed in terms of decibels. Thus, applicable law does not necessarily require that sound pressure level measurements be obtained to determine whether a noise source is in compliance with ~~Rule 102~~. In the event sound pressure level measurements are obtained, such measurements shall be in accordance with this Report. However, the contents of this Report shall not be interpreted so as to require sound pressure level measurements to determine whether a noise source is in compliance with ~~Rule 102~~.

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the extent of noise pollution caused by the source of sound, (2) determining the ambient, and (3) analyzing those acoustical parameters that describe the sound source.

- (b) Instrumentation set up may include, but is not limited to, any method given in a subsequent section herein.

5.2 Data Acquisition and Operation:

- (a) Before taking sound pressure level measurements, measure and record (near the measurement site): (1) wind speed and direction, (2) ambient temperature, (3) relative humidity, and (4) barometric pressure. Turn the measuring instrument on and allow the instrument to stabilize. Monitor and record the battery condition of the calibrator and all measuring instruments.

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.

- (b) Measure the sound pressure level data 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: (1) determining the extent of noise pollution caused by the source of sound, (2) determining the ambient, and (3) analyzing those acoustical parameters that describe the sound source.
- (c) While measurements are being taken, visual and aural surveillance of extraneous sound sources and varying wind conditions should be made to insure that the conditions of measurement are accurately known. Record any variations in these parameters that may affect data.
- (d) If necessary to determine the extent of noise pollution caused by the source of sound, determine the ambient at the measurement site by means of measurement or analysis.
- (e) After recording sound pressure level measurements, 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  $\pm 0.5$

## ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

dB from the most recent field calibration, the sound pressure level measurements obtained since such most recent field calibration shall not be used for enforcement purposes.

Before removing the calibrator from the microphone, turn the calibrator off. If the ambient 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 shall be recorded.

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: (1) windspeed and direction, (2) ambient temperature, (3) relative humidity, and (4) barometric pressure.

- (f) If necessary for investigatory purposes, record: (1) the physical and topographical description of the ground surface within the vicinity of the measurement site, (2) survey site location, (3) a description of the sound source, (4) a diagram of the area, (5) location of reflective surfaces near the microphone, and (6) the approximate location of the sound source relative to the microphone position.
- (g) Data acquisition and operation may include, but is not limited to, any method given in a subsequent section herein.

### 6.0 MEASUREMENT TECHNIQUES FOR PART 901

#### 6.1 Site Selection:

- (a) Measurements may be taken at one or more microphone positions within the appropriate receiving land. Measurement instruments shall be set up outdoors within the boundaries of the receiving land for the purpose of determining whether a noise source is in compliance.
- (b) Measurement instruments shall be set up not less than 25 feet (7.6 meters) from the property-line-noise-source. The 25-foot (7.6-meter) set back requirement is from the noise source and not the property line unless the noise source is contiguous to the property line. See Figure 2.

## ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

- (c) Other measurement locations may be used for investigatory purposes such as, but not limited to, the following: (1) determining the extent of noise pollution caused by the source of sound, (2) determining the ambient, and (3) analyzing those acoustical parameters that describe the sound source.
- (d) For measurements of sound sources with no audible discrete tones, microphones should not be set up less than 25 feet (7.6 meters) from any reflective surface which may affect data. If measurements must be taken within 25 feet (7.6 meters), the effect, if any, of the reflective surface on the measured data must be determined.
- (e) For measurements of sound sources with audible discrete tones microphones should not be set up less than 50 feet (15.2 meters) from any reflective surface which may affect data. If measurements must be taken within 50 feet (15.2 meters), the effect, if any, of the reflective surface on the measured data must be determined.
- (f) Objects with small dimensions (trees, posts, bushes, etc.) should not be within 5 feet (1.5 meters) of the microphone position. If measurements must be taken within 5 feet (1.5 meters) of such objects, the effect, if any, on the measured data must be determined.

### 6.2 Instrumentation Set Up:

After a measurement site has been chosen, a tripod shall be set over the site. The tripod shall be extended to a height between 3 feet 8 inches (1.12 meters) and 4 feet 10 inches (1.47 meters) above ground. A microphone shall be attached to the appropriate end of a 5-foot (1.5-meter) or longer cable and shall be affixed to the top of the tripod. The other end of the cable shall be connected to the measuring instrument. The measuring instrument should be separated from the microphone so as to minimize any influence on the measurements. The cable movement must be minimized during the measurement period.

### 6.3 Data Acquisition and Operation:

- (a) Before taking sound pressure level measurements, measure and record (near the measurement site): (1) wind speed and direction, (2) ambient temperature, (3) relative humidity, and (4) barometric pressure. Turn the measuring instrument on and

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

allow the instrument to stabilize. Monitor and record the battery condition of the calibrator and all measuring instruments.

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 suitable-windscreen to the microphone.

Adjust the microphone to the angle of incidence that will yield the flattest frequency response in accordance with the manufacturer's specifications.

- (b) Measure the sound pressure level data within the limitations of Section 6.4 and according to the manufacturer's recommended procedures.<sup>7</sup> Other sound pressure levels may be used for investigatory purposes such as, but not limited to, the following: (1) determining the extent of noise pollution caused by the source of sound, (2) determining the ambient, and (3) analyzing those acoustical parameters that describe the sound source.
- (c) While sound measurements are being taken, the operator must be separated from the microphone so as to minimize any influence on the measurements.
- (d) While measurements are being taken, visual and aural surveillance of extraneous sound sources and varying wind conditions should be made to insure that the conditions of measurement are accurately known. Record any variations in these parameters that may affect data.
- (e) To minimize wind effects on the microphone, sound measurements shall not be taken when the wind velocity is greater than 12 miles per hour (5.4 meters/second) at the microphone position.
- (f) For the purposes of data correction, determine the ambient sound at the measurement site by means of measurement or analysis.

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7 If a conflict should arise, the limitations of Section 6.4 supercede the manufacturer's specifications.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

- (g) 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  $\pm 0.5$  dB from the most recent field calibration, the sound pressure level measurements obtained since such most recent field calibration shall not be used for enforcement purposes.

Before removing the calibrator from the microphone, turn the calibrator off. If the ambient 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 shall be recorded.

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: (1) windspeed and direction, (2) ambient temperature, (3) relative humidity, and (4) barometric pressure.

- (h) 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.
- (i) Laboratory analyses may be performed on magnetic tape recorded field data. A description of the laboratory instrumentation and procedures shall be recorded. Analyses used in the laboratory shall be correlated to field measurement techniques.

6.4 Limiting Procedures for Specific Types of Data Acquisition:

- (a) For measurements of non-impulsive sound with audible discrete tones, one-third octave band sound pressure levels shall be obtained in determining whether a noise source is in compliance with ~~Rule 207~~ of the Noise Regulations.
- SECTION 901.106**
- (b) For measurements of non-impulsive sound with no audible discrete tones, octave band sound pressure levels shall be obtained in determining whether a noise source is in compliance with ~~Rules 202 through 205~~ of the Noise Regulations.

**PART 901**

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

USE ONE HOUR Log

(c) Steady sound:

- (1) For measurements of steady sound at one or more octave or one-third octave bands, sound pressure level measurements shall be obtained for such octave or one-third octave bands. The average of the maximum and minimum sound pressure levels shall be obtained for each octave or one-third octave band center frequency during the period of observation (See Figure 3A).
- (2) For measurements of steady sound that varies between two or more levels when observed using the "fast" or "slow" meter characteristic, the average sound pressure level for the steady level of interest shall be obtained (See Figure 3B).
- (3) For steady sound whose duration is five seconds or more the "fast" or "slow" meter characteristic shall be used. For levels that are steady for one to five seconds the "fast" meter characteristic shall be used.

(d) Fluctuating Sound:

- (1) For measurements of fluctuating sound at one or more octave or one-third octave bands where the fluctuations on the indicating meter are between  $\pm 3$  dB and  $\pm 5$  dB ("slow" meter characteristic), obtain the sound pressure level 3 dB below the maximum level. This corresponds to the rms sound pressure level and shall be obtained for such octave or one-third octave bands (See Figure 3C). When successive fluctuations are observed to have different maximum levels, obtain the sound pressure level 3 dB below the mean of the maximum levels for several excursions.
- (2) For measurements of fluctuating sound at one or more octave or one-third octave bands where the fluctuations on the indicating meter are greater than  $\pm 5$  dB, the sound pressure level may deviate from the true rms value by several decibels (See Figure 4A). The recorded level shall be obtained by reading the maximum level of the sound level meter 10 or more times during the period of observation. The recorded level shall be obtained from the following equation:

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

**USE ONE HOUR LOG**

$$L = 10 \log \left\{ 1/N \sum_{i=1}^N 10^{L_i/10} \right\}$$

where

N = the total number of observations

$L_i$  = the maximum level at each observation

- (3) For measurements of fluctuating sound that varies between two or more levels when observed using the "slow" meter characteristic, the measurement methods specified in 6.4(d), (1) or (2), may be used to obtain sound pressure levels for the fluctuating level of interest (See Figure 4B).
- (e) Intermittent Sound: For measurements of intermittent sound the methods specified in 6.4 a, b, c, or d shall be used during the time the sound exceeds the ambient level (See Figure 4C).
- (f) Impulsive Sound: For measurements of impulsive sound, A-weighting and the "fast" meter characteristic shall be used. The maximum excursion of the indicating meter shall be obtained. Measurements may also be taken using other weightings and meter characteristics for informational purposes (See Figure 5A).
- (g) Quasi-Steady Sound: For measurement of quasi-steady sound, A-weighting and the "fast" meter characteristic shall be used. The maximum excursion of the indicating meter shall be obtained. Measurements may also be taken using other weightings and meter characteristics for informational purposes (See Figure 5B).

6.5 Correction Factors:

If necessary, correction factors rounded to the nearest 1/2 decibel shall 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 shall only be used to make negative corrections (subtraction from the field data). In no case shall such calibration correction factors be added to the measured sound pressure levels so as to raise the sound pressure level field data.



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

The correction factors applicable to the measurement site may include, but are not limited to, corrections for reflective surfaces and ambient sound.

FIGURE 1  
ANGLE OF INCIDENCE IS SHOWN FOR  $0^\circ$ ,  $70^\circ$  AND  $90^\circ$

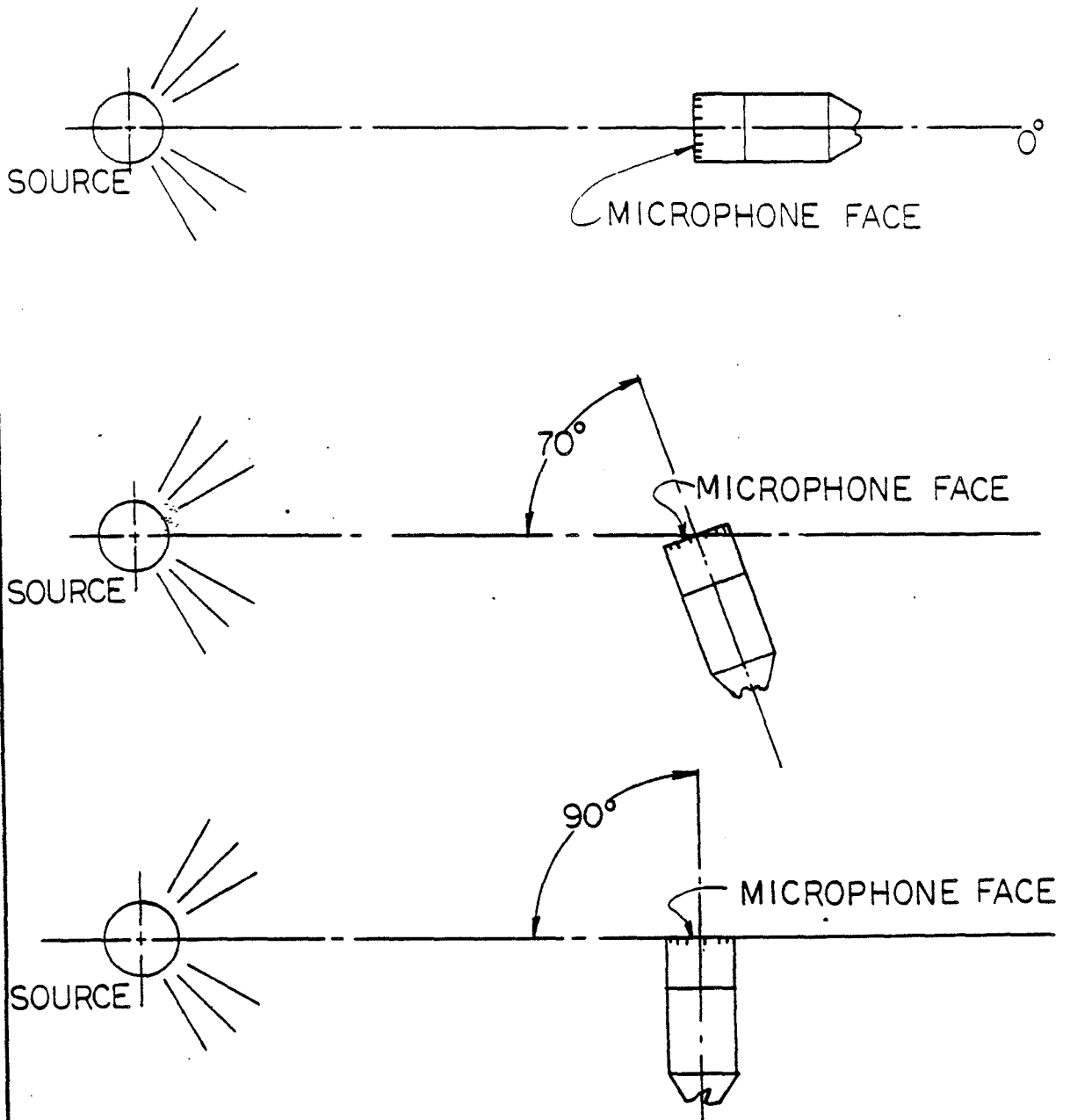
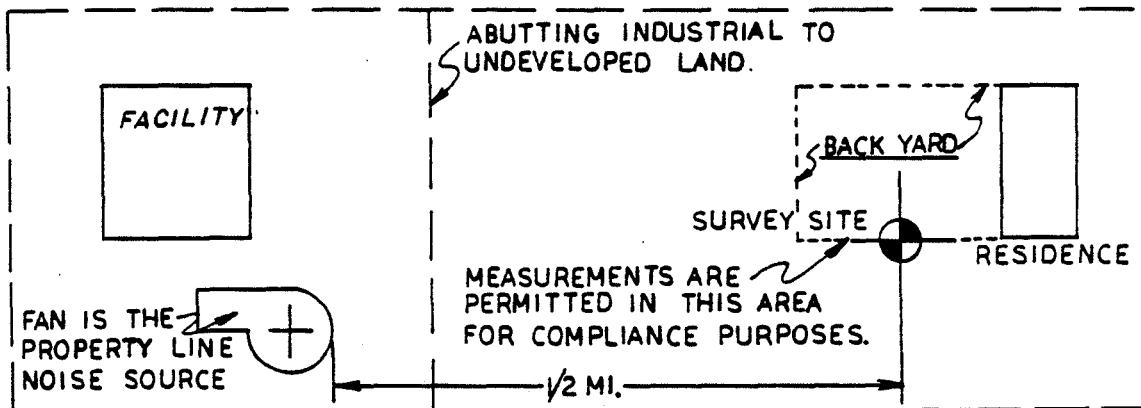
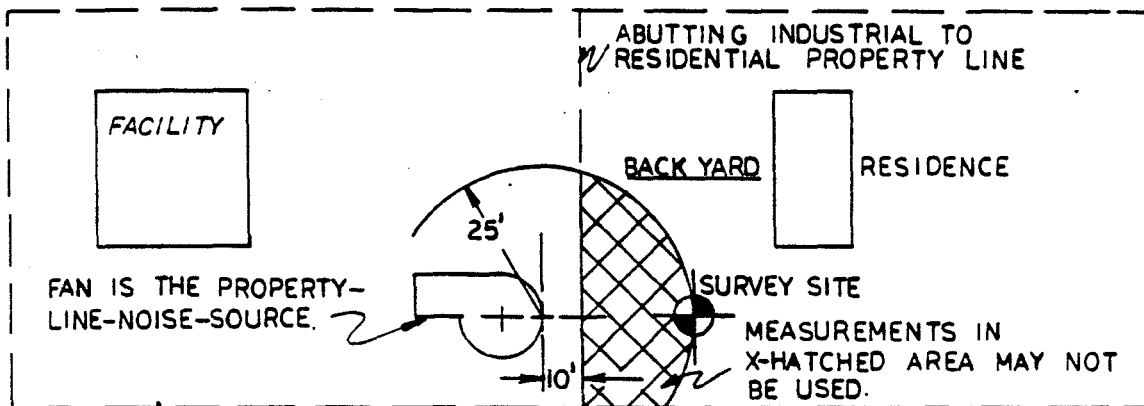
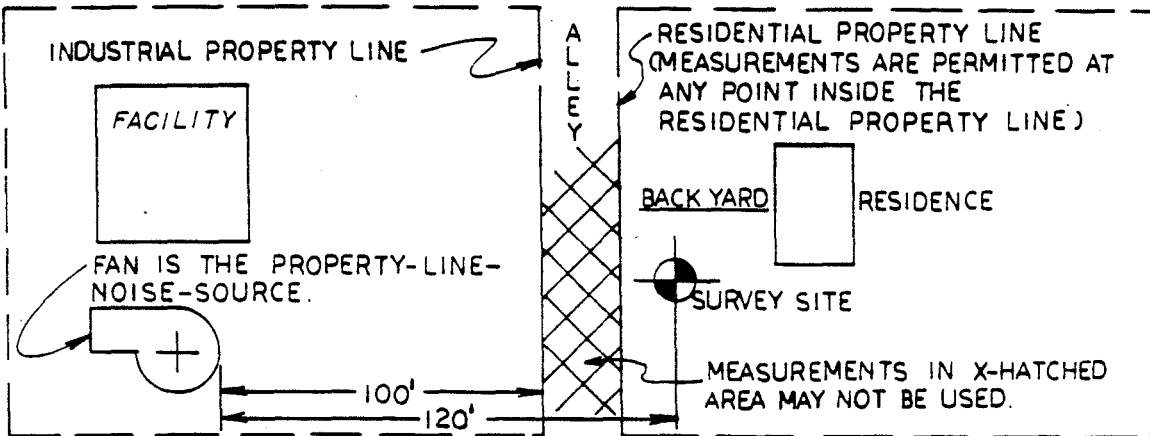


FIGURE 2

EXAMPLES OF POSSIBLE SURVEY SITE LOCATIONS FOR ENFORCEMENT OF RULES 202, 203, 206 AND 207.



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## MARYLAND NOISE REGULATIONS



Maryland

**Title 26**  
**DEPARTMENT OF THE ENVIRONMENT**

**Subtitle 02 OCCUPATIONAL, INDUSTRIAL, AND**  
**RESIDENTIAL HAZARDS**

**Chapter 03 Control of Noise Pollution**

Authority: Environment Article, §3-401,  
Annotated Code of Maryland

**Preface**

The Environmental Noise Act of 1974 of the State of Maryland declares as policy the limitation of noise to that level which will protect the health, general welfare, and property of the people of the State. It requires that the Department assume responsibility for the jurisdiction over the level of noise, and prepare regulations for the control of noise, including the establishment of standards for ambient noise levels and equipment performance with respect to noise, for adoption by the Secretary of the Environment. Enforcement of the regulations and standards is the responsibility of the Department in all areas, using the facilities and services of local agencies within the areas to the greatest extent possible. The Department shall coordinate the programs of all State agencies relating to noise abatement, and each State agency prescribing sound level limits or regulations respecting noise shall obtain the endorsement of the Department in prescribing any limits or regulations.

**.01 Definitions.**

A. "ANSI" means American National Standards Institute or its successor bodies.

B. "Construction" means any site preparation, assembly, erection, repair, alteration, or similar activity.

C. "Day-night average sound level ( $L_{dn}$ )" means in decibels, the energy average sound level for a 24-hour day with a 10 decibel penalty applied to noise occurring during the nighttime period; i.e., noise levels occurring during the period from 10 p.m. one day until 7 a.m. the next are treated as though they were 10 dBA higher than they actually are. The use of the A-weighting is understood. The mathematical expression for  $L_{dn}$  is as follows:

$$L_{dn} = 10 \log_{10} \left[ \left( \frac{15}{24} \right) 10^{L_d + 10} + \left( \frac{9}{24} \right) 10^{(L_n + 10) + 10} \right]$$

where  $L_d$  = The daytime average sound level.

$L_n$  = The nighttime average sound level.

D. "dBA" means abbreviation for the sound level in decibels determined by the A-weighting network of a sound level meter or by calculation from octave band or one-third octave band data.

E. "Daytime hours" means 7 a.m. to 10 p.m., local time.

F. "Decibel (dB)" means a unit of measure equal to ten times the logarithm to the base ten of the ratio of a particular sound pressure squared to a standard reference pressure squared. For the purpose of this subtitle, 20 micropascals shall be the standard reference pressure.

G. "Demolition" means any dismantling, destruction, or removal activities.

H. "Department" means the Department of the Environment.

I. "Emergency" means any occurrence or set of circumstances involving actual or imminent physical trauma or property damage which demands immediate action.

J. "Environmental noise" means the noise that exists at any location from all sources.

K. "Environmental noise standards" means the goals for environmental noise, the attainment and maintenance of which, in defined areas and under specific conditions, are necessary to protect the public health and general welfare.

L. "Equivalent sound level" (also "average sound level") means the level of a constant sound which, in a given situation and time period, would convey the same sound energy as does the actual time-varying sound during the same period. Equivalent sound level is the level of the time weighted, mean-square, A-weighted sound pressure. A numerical subscript may be used to indicate the time period under consideration; i.e.,  $L_{eq}(24)$  or  $L_{eq}(8)$  for 24-hour and 8-hour periods, respectively. No subscript indicates a 24-hour period. The mathematical expression for the  $L_{eq}$  is as follows:

$$L_{eq} = 10 \log_{10} \left[ \frac{1}{t_2 - t_1} \int_{t_1}^{t_2} 10^{L_{AWE}/10} dt \right] \text{ dBA}$$



where  $t_1$  and  $t_2$  are the beginning and ending times, respectively, of the period over which the average is determined, and  $L_A(t)$  is the instantaneous A-weighted sound pressure level fluctuating with time.

M. "Nighttime hours" means 10 p.m. to 7 a.m., local time.

N. "Noise" means the intensity, frequency, duration, and character of sound, including sound and vibration of sub-audible frequencies.

O. "Noise pollution" means the presence of noise of sufficient loudness, character, and duration, which whether from a single source or multiple sources, is, or may be predicted with reasonable certainty to be, injurious to health or which unreasonably interferes with the proper enjoyment of property or with any lawful business or activity.

P. "Periodic noise" means noise possessing a repetitive on-and-off characteristic.

Q. "Person" means any individual, group of individuals, firm, partnership, voluntary association, or private, public, or municipal corporation, or political subdivision of the State, or department, bureau, agency, or instrument of federal, State, or local government, responsible for the use of property.

R. "Prominent discrete tone" means any sound which can be distinctly heard as a single pitch or a set of single pitches. For the purposes of this regulation, a prominent discrete tone shall exist if the one-third octave band sound pressure level in the band with the tone exceeds the arithmetic average of the sound pressure levels of the 2 contiguous one-third octave bands by 5 dB for center frequencies of 500 Hz and above and by 8 dB for center frequencies between 160 and 400 Hz and by 15 dB for center frequencies less than or equal to 125 Hz.

S. "Sound level" means, in decibels, the weighted sound pressure level measured by the use of a sound level meter satisfying the requirements of ANSI S1.4 1971 "Specifications for Sound Level Meters". Sound level and noise level are synonymous. The weighting employed shall always be specified.

T. "Sound level meter" means an instrument, meeting ANSI S1.4 1971 "Specifications for Sound Level Meters", comprising a microphone, an amplifier, an output meter, and frequency-weighting network(s) that is used for the measurement of sound pressure levels in a specified manner.

**U. Sound Pressure.**

(1) "Sound pressure" means the minute fluctuations in atmospheric pressure which accompany the passage of a sound wave.

(2) For a steady sound, the value of the sound pressure average over a period of time.

(3) Sound pressure is usually measured in dynes per square centimeter (dyne/cm<sup>2</sup>), or in newtons per square meter (N/m<sup>2</sup>), or in micropascals.

V. "Sound pressure level" means, in decibels, 20 times the logarithm to the base ten of the ratio of a sound pressure to the reference sound pressure of 20 micropascals (20 micronewtons per square meter). In the absence of any modifier, the level is understood to be that of a root-mean-square pressure.

W. "Source" means any person or property, real or personal, contributing to noise pollution.

X. "Vibration" means any oscillatory motion of solid bodies.

Y. "Zoning district" means a general land use category, defined according to local subdivision, the activities and uses for which are generally uniform throughout the subdivision. For the purposes of this regulation, property which is not zoned "residential", "commercial", or "industrial", shall be classified according to use as follows:

(1) "Commercial" means property used for buying and selling goods and services;

(2) "Industrial" means property used for manufacturing and storing goods;

(3) "Residential" means property used for dwellings.

**.02 Environmental Noise Standards.****A. Precepts.**

(1) It is known that noise above certain levels is harmful to the health of humans. Although precise levels at which all adverse health effects occur have not definitely been ascertained, it is known that one's well-being can be affected by noise through loss of sleep, speech interference, hearing impairment, and a variety of other psychological and physiological factors. The establishment of ambient noise standards, or goals, must provide margins of safety in reaching conclusions based on available data which relate noise exposure to health and welfare effects, with due consideration to technical and economic factors.

(2) The environmental noise standards set forth here represent goals expressed in terms of equivalent A-weighted sound levels which are protective of the public health and welfare. The ambient noise levels shall be achieved through application, under provisions of laws or regulations or otherwise, of means for reducing noise levels including, but not limited to, isolation of noise producing equipment, dampening of sound waves by insulation, equipment modification and redesign, and land use management.

#### B. Standards for Environmental Noise—General.

(1) The standards are goals for the attainment of an adequate environment. The standards set out in Regulation .03 are intended to achieve these goals.

(2) The following sound levels represent the standards for the State by general zoning district:

**Table 1.**  
**Environmental Noise Standards**

<i>Zoning District</i>	<i>Level</i>	<i>Measure</i>
Industrial	70 dBA	$L_{eq}(24)$
Commercial	64 dBA	$L_{dn}$
Residential	55 dBA	$L_{dn}$

#### .03 General Regulations.

##### A. Noise and Vibration Prohibitions.

(1) A person may not cause or permit noise levels which exceed those specified in Table 2 except as provided in §A(2) or (3), or §B, below.

**Table 2.**  
**Maximum Allowable Noise Levels (dBA)**  
**for Receiving Land Use Categories**

<i>Effective Date</i>	<i>Day/Night</i>	<i>Industrial</i>	<i>Commercial</i>	<i>Residential</i>
Upon Adoption	Day	75	67	65
	Night	75	62	55

(2) A person may not cause or permit noise levels emanating from construction or demolition site activities which exceed:

(a) 90 dBA during daytime hours;

(b) The levels specified in Table 2 during nighttime hours.

(3) A person may not cause or permit the emission of prominent discrete tones and periodic noises which exceed a level which is 5 dBA lower than the applicable level listed in Table 2.

(4) A person may not cause or permit, beyond the property line of a source, vibration of sufficient intensity to cause another person to be aware of the vibration by such direct means as sensation of touch or visual observation of moving objects. The observer shall be located at or within the property line of the receiving property when vibration determinations are made.

**B. Exemptions.**

(1) The provisions of this regulation may not apply to devices used solely for the purpose of warning, protecting, or alerting the public, or some segment thereof, of the existence of an emergency situation.

(2) The provisions of this regulation do not apply to the following:

(a) Household tools and portable appliances in normal usage.

(b) Lawn care and snow removal equipment (daytime only) when used and maintained in accordance with the manufacturer's specifications.

(c) Agricultural field machinery when used and maintained in accordance with manufacturer's specifications.

(d) Blasting operations for demolition, construction, and mining or quarrying (daytime only).

(e) Motor vehicles on public roads.

(f) Aircraft and related airport operations at airports licensed by the State Aviation Administration.

(g) Boats on State waters or motor vehicles on State lands under the jurisdiction of the Department of Natural Resources.

(h) Emergency operations.

(i) Pile driving equipment during the daytime hours of 8 a.m. to 5 p.m.

(j) Sound not electronically amplified created by sporting, amusement, and entertainment events and other public gatherings operating according to terms and conditions of the appropriate local jurisdictional body. This includes but is not limited to athletic contests, amusement parks, carnivals, fairgrounds, sanctioned auto racing facilities.

ties, parades, and public celebrations. This exemption only applies between the hours of 7 a.m. and 12 midnight.

(k) Rapid rail transit vehicles and railroads.

(l) Construction and repair work on public property.

(m) Air conditioning or heat pump equipment used to cool or heat housing on residential property. For this equipment, a person may not cause or permit noise levels which exceed 70 dBA for air conditioning equipment at receiving residential property and 75 dBA for heat pump equipment at receiving residential property.

#### C. Variance Procedure.

(1) Any person who believes that meeting the requirements of §A, above, is not practical in a particular case may request an exception to its requirements.

(2) Requests submitted to the Department shall be in writing and shall include evidence to show that compliance is not practical.

(3) Upon receipt of a request for an exception, the Department shall schedule a hearing to be held within 60 days.

(4) The applicant for the exception, at least 30 days before the hearing date, shall advertise prominently the hearing by placing a notice in a newspaper of general circulation in the subdivision in which the facility or source for which the exception is sought is located. The notice shall include the name of the facility or source and such additional information as the Department may require.

(5) Based upon evidence presented at the hearing, the Secretary may grant an exception to §A, above, for a period not to exceed 5 years under terms and conditions appropriate to reduce the impact of the exception.

(6) Exceptions shall be renewable upon receipt by the Department of evidence that conditions under which the exception was originally granted have not changed significantly.

#### D. Measurement.

(1) The equipment and techniques employed in the measurement of noise levels may be those recommended by the Department, which may, but need not, refer to currently accepted standards or recognized organizations, including, but not limited to, the American National Standards Institute (ANSI), American Society for Testing and Materi-

als (ASTM), Society of Automotive Engineers (SAE), and the United States Environmental Protection Agency (EPA).

(2) The measurement of noise levels shall be conducted at points on or within the property line of the receiving property or the boundary of a zoning district, and may be conducted at any point for the determination of identity in multiple source situations.

(3) Sound level meters used to determine compliance with Regulation .03 shall meet or exceed the specifications of the American National Standards Institute or its successor bodies ANSI S1.4-1971 for Type II sound level meters.

#### **.04 Emission Regulations.**

Reserved.

#### **.05 Penalties.**

A. Civil Penalty. Any person who willfully violates these regulations shall be liable to a civil penalty of not more than \$10,000. Each day during which a violation continues there shall be liability for a separate penalty.

B. Plan for Compliance. A violator who has submitted a plan for compliance with these regulations and has that plan or amendments to it approved by the Secretary, upon recommendation of the Department, may not be considered to be in violation of these regulations as long as he acts in accordance with the original or amended plan.

### **Administrative History**

Effective date: August 6, 1975 (2:17 Md. R. 1189)

Regulation .01A-1, W-1 adopted effective February 15, 1982 (9:3 Md. R. 222); repealed effective March 28, 1983 (10:6 Md. R. 558)

Regulations .01 and .03A, B, D amended effective September 14, 1977 (4:19 Md. R. 1468)

Regulation .01C amended effective March 28, 1983 (10:6 Md. R. 558)

Regulations .01C, Q; .02B; .03B, D amended effective February 15, 1982 (9:3 Md. R. 222)

Regulation .03A amended as an emergency provision effective November 13, 1979 (6:24 Md. R. 1917); emergency status expired March 29, 1980

Regulation .03A and B amended effective March 28, 1983 (10:6 Md. R. 558)

Regulation .04 repealed effective September 14, 1977 (4:19 Md. R. 1468)

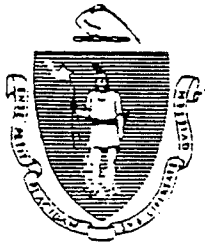
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Chapter recodified from COMAR 10.20.01 to COMAR 26.02.03

## MASSACHUSETTS NOISE REGULATIONS







*The Commonwealth of Massachusetts*  
*Executive Office of Environmental Affairs*  
*Department of Environmental Quality Engineering*  
*Division of Air Quality Control*  
*One Winter Street, Boston 02108*

February 1, 1990

DAQC Policy 90-001

DIVISION OF AIR QUALITY CONTROL POLICY

This policy is adopted by the Division of Air Quality Control. The Department's existing guideline for enforcing its noise regulation (310 CMR 7.10) is being reaffirmed.

P O L I C Y

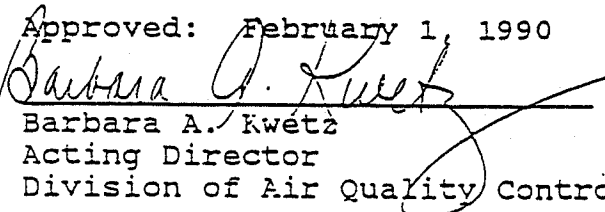
A source of sound will be considered to be violating the Department's noise regulation (310 CMR 7.10) if the source:

1. ~~Increases the broadband sound level by more than 10 dB(A) above ambient, or~~
2. ~~Produces a "pure tone" condition, when any octave band center frequency sound pressure level exceeds the two adjacent center frequency sound pressure levels by 3 decibels or more.~~

These criteria are measured both at the property line and at the nearest inhabited residence. Ambient is defined as the background A-weighted sound level that is exceeded 90% of the time measured during equipment operating hours. The ambient may also be established by other means with the consent of the Department.

Approved: February 1, 1990

Effective: Immediately

  
Barbara A. Kwetz  
Acting Director  
Division of Air Quality Control

7.09: U Dust, Odor, Construction, and Demolition

(1) No person having control of any dust or odor generating operations such as, but ~~not limited to~~ asphalt batching plants, asphalt roofing materials manufacturing plants, asphalt blowing plants, foundries, chemical products manufacturing plants, incinerators, fuel utilization facilities, petroleum products manufacturing plants, aggregate manufacturing plants, food preparation or processing facilities, wood products plants, dry cleaning establishments, paint and varnish manufacturing plants, paper manufacturing plants, leather manufacturing plants, concrete batching plants, metal coating and treating plants, land clearing operations, construction work, dump operations, agricultural operations, and street sweeping shall permit emissions therefrom which cause or contribute to a condition of air pollution.

(2) No person responsible for any construction or demolition of an industrial, commercial, or institutional building or residential building with twenty or more dwelling units, shall cause, suffer, allow, or permit emissions therefrom which cause or contribute to a condition of air pollution. Said person shall notify the Department in writing twenty days prior to the initiation of said construction or demolition operation. The twenty day advance notice period will be waived in the event of emergency demolition necessary to prevent a public health or safety hazard.

(3) No person responsible for an area where construction or demolition has taken place shall cause, suffer, allow, or permit particulate emissions therefrom to cause or contribute to a condition of air pollution by failure to seed, pave, cover, wet, or otherwise treat said area to prevent excessive emissions of particulate matter.

(4) No person shall cause, suffer, allow, or permit the handling, transportation, or storage of any material in a manner that results or may result in emissions therefrom which cause or contribute to a condition of air pollution.

(5) No persons responsible for any construction or demolition of a structure that contains friable asbestos material shall fail to comply with 310 CMR 7.09(2) and 310 CMR 7.02. (National Emission Standards for Hazardous Pollutants)

(6) No person shall cause, suffer, allow, or permit the operation of mechanized street sweeping equipment that is not equipped with a suitable dust collection or dust suppression system which is maintained in good operating condition and is operated continuously while the street sweeping equipment is in use to prevent conditions of air pollution.

(7) 310 CMR 7.09(1) through 7.09(4) and 7.09(6) are subject to the enforcement provisions specified in 310 CMR 7.52.

7.10: U Noise

(1) No person owning, leasing, or controlling a source of sound shall willfully, negligently, or through failure to provide necessary equipment, service, or maintenance or to take necessary precautions cause, suffer, allow, or permit unnecessary emissions from said source of sound that may cause noise.

(2) 310 CMR 7.10(1) shall pertain to, but shall not be limited to, prolonged unattended sounding of burglar alarms, construction and demolition equipment which characteristically emit sound but which may be fitted and accommodated with equipment such as enclosures to suppress sound or may be operated in a manner so as to suppress sound, suppressable and preventable industrial and commercial sources of sound, and other man-made sounds that cause noise.

(3) 310 CMR 7.10(1) shall not apply to sounds emitted during and associated with:

(a) parades, public gatherings, or sporting events, for which permits have been issued provided that said parades, public gatherings, or sporting events in one city or town do not cause noise in another city or town;

7.50: continued

- (c) when compliance with the regulation is interfered with due to acts of nature, or
  - (d) when the benefits expected to be derived from requiring such person to comply with such regulation would be substantially outweighed by the cost to such person and the loss to the public resulting from compliance, and that granting such a variance would have no significant deleterious effect on public health.
- (3) Variances where granted, shall:
- (a) be in writing,
  - (b) not extend beyond May 31, 1975, or such later date as may be prescribed by Federal law,
  - (c) be subject to the approval of the administrator of the Environmental Protection Agency.

The applicant shall assume all costs such as, but not limited to, the publishing of legal notices incidental to the application for and granting of a variance.

7.51: U Hearings Relative to Orders and Approvals

- (1) The Department will grant a hearing, upon application in writing, for the purpose of reconsideration to any person to whom an ORDER has been issued, provided that such application is made within ten (10) days of the receipt of the ORDER.
- (2) Upon receipt of a proposal for the construction, substantial reconstruction or alteration of any facility regulated by the Department of Public Utilities, insofar as the facility may have an impact on air quality, the Department shall hold a public hearing prior to consideration for approval or disapproval of said facility.

7.52: U Enforcement Provisions.

Any police department, fire department, board of health officials, or building inspector or his designee acting within his jurisdictional area is hereby authorized by the Department to enforce, as provided for in Section 142B of Chapter 111, any regulation in which specific reference to 310 CMR 7.52 is cited.

(7.53 through 7.59: Reserved)

7.60: U Severability

Each of these regulations shall be construed as separate to the end that if any regulation or sentence, clause, or phrases thereof shall be held invalid for any reason, the remainder of that regulation and all other regulations shall continue in full force.

REGULATORY AUTHORITY

310 CMR 7.00: M.G.L. c. 111, s. 142A - J.

7.10: continued

- (b) emergency police, fire, and ambulance vehicles;
- (c) police, fire, and civil and national defense activities;
- (d) domestic equipment such as lawn mowers and power saws between the hours of 7 A.M. and 9 P.M.

(4) 310 CMR 7.10(1) is subject to the enforcement provisions specified in 310 CMR 7.52.

C 40 § 21  
munic. can regulate  
noise for whatever source

MINNESOTA NOISE REGULATIONS



07/15/86

CHAPTER 7010

MINNESOTA POLLUTION CONTROL AGENCY

AIR QUALITY DIVISION

NOISE POLLUTION CONTROL RULES

7010.0010	INCORPORATION BY REFERENCE
7010.0020	DEFINITIONS
7010.0030	NOISE CONTROL REQUIREMENT
7010.0040	NOISE STANDARDS
7010.0050	NOISE AREA CLASSIFICATION
7010.0060	MEASUREMENT METHODOLOGY
7010.0070	SOUND ATTENUATION MEASUREMENT METHODOLOGY
7010.0080	VARIANCE
REPEALER	

7010.0010 INCORPORATION BY REFERENCE.

For the purpose of chapter 7010, American National Standards Institute, Specification for Sound Level Meters, S1.4-1983 is incorporated by reference. This publication is available from the American National Standards Institute, 1430 Broadway, New York, New York 10018 and can be found at: the offices of the Minnesota Pollution Control Agency, 520 Lafayette Road North, Saint Paul, Minnesota 55155; the Government Documents Section, Room 409, Wilson Library, University of Minnesota, 309 19th Avenue South, Minneapolis, Minnesota 55454; and the State of Minnesota Law Library, Ford Building, 117 University Avenue, Saint Paul, Minnesota 55155. This document is not subject to frequent change.

The Federal Highway Administration publication, Sound Procedures for Measuring Highway Noise: Final Report, FHWA-DP-45-1R (August 1981) is incorporated by reference. This publication is available from the United States Department of Transportation, Federal Highway Administration, 1000 North Globe Road, Arlington, Virginia 22201 and can be found at: the offices of the Minnesota Pollution Control Agency, 520 Lafayette Road North, Saint Paul, Minnesota 55155; the Government Documents Section, Room 409, Wilson Library, University of Minnesota, 309 19th Avenue South, Minneapolis, Minnesota 55454; and the State of Minnesota Law Library, Ford Building, 117 University Avenue, Saint Paul, Minnesota 55155. This document is not subject to frequent change.

Statutory Authority: MS s 116.07 subds 2,4

7010.0020 DEFINITIONS.

Subpart 1. Application. The terms used in chapter 7010 have the meanings given them in this part.

Subp. 2. A-Weighted. "A-Weighted" means a specific weighting of the sound pressure level for the purpose of determining the human response to sound. The specific weighting characteristics and tolerances are those given in American National Standards Institute S1.4-1983, section 5.1.

Subp. 3. Daytime. "Daytime" means those hours from 7:00 a.m. to 10:00 p.m.

Subp. 4. dB(A). "dB(A)" means a unit of sound level expressed in decibels (dB) and A-weighted.

Subp. 5. Decibel. "Decibel" means a unit of sound pressure level, abbreviated as dB.

Subp. 6. Impulsive noise. "Impulsive noise" means either a single sound pressure peak (with either a rise time less than 200 milliseconds or total duration less than 200 milliseconds) or multiple sound pressure peaks (with either rise times less than 200 milliseconds or total duration less than 200 milliseconds) spaced at least by 200 millisecond pauses.

Subp. 7. L<sub>10</sub>. "L<sub>10</sub>" means the sound level, expressed in dB(A), which is exceeded ten percent of the time for a one hour survey, as measured by test procedures approved by the director.

Subp. 8. L<sub>50</sub>. "L<sub>50</sub>" means the sound level, expressed in dB(A), which is exceeded fifty percent of the time for a one hour survey, as measured by test procedures approved by the director.

Subp. 9. Municipality. "Municipality" means a county; a city; a town; a regional planning and development commission established under Minnesota Statutes, chapter 473; the metropolitan council; or other governmental subdivision of the state responsible by law for controlling or restricting land use within its jurisdiction.

Subp. 10. Nighttime. "Nighttime" means those hours from 10:00 p.m. to 7:00 a.m.

Subp. 11. Person. "Person" means any human being, any municipality or other governmental or political subdivision or other public department or agency, any public or private corporation, any partnership, firm, association, or other organization, any receiver, trustee, assignee, agency, legal entity, other than a court of law, or any legal representative of the foregoing, but does not include the agency.

Subp. 12. Sound pressure level. "Sound pressure level", in decibels, means 20 times the logarithm to the base 10 of the ratio of the pressure to the reference pressure. The reference pressure shall be 20 micronewtons per square meter.

**Statutory Authority: MS s 116.07 subds 2,4**



**7010.0030 NOISE CONTROL REQUIREMENT.**

No person may violate the standards established in part 7010.0040, unless exempted by Minnesota Statutes, section 116.07, subdivision 2a. Any municipality having authority to regulate land use shall take all reasonable measures within its jurisdiction to prevent the establishment of land use activities listed in noise area classification (NAC) 1, 2, or 3 in any location where the standards established in part 7010.0040 will be violated immediately upon establishment of the land use.

Statutory Authority: MS s 116.07 subds 2,4

**7010.0040 NOISE STANDARDS.**

Subpart 1. Scope. These standards describe the limiting levels of sound established on the basis of present knowledge for the preservation of public health and welfare. These standards are consistent with speech, sleep, annoyance, and hearing conservation requirements for receivers within areas grouped according to land activities by the noise area classification (NAC) system established in part 7010.0050. However, these standards do not, by themselves, identify the limiting levels of impulsive noise needed for the preservation of public health and welfare. Noise standards in subpart 2 apply to all sources.

Subp. 2. Noise standards. ▲

Noise Area Classification	Daytime		Nighttime	
	L <sub>50</sub>	L <sub>10</sub>	L <sub>50</sub>	L <sub>10</sub>
1	60	65	50	55
2	65	70	65	70
3	75	80	75	80

Statutory Authority: MS s 116.07 subds 2,4

**7010.0050 NOISE AREA CLASSIFICATION.**

Subpart 1. Applicability. The noise area classification is based on the land use activity at the location of the receiver and determines the noise standards applicable to that land use activity unless an exemption is applied under subpart 3.

Subp. 2. Noise area classification. The noise area classifications and the activities included in each classification are listed below:

Noise Area Classification 1 - Land Use Activities

Household Units (includes farm houses)	Medical/other health services
Group quarters	Religious activities
Residential hotels	Cultural activities and nature exhibitions
Mobile home parks or courts	Entertainment assembly
Transient lodging	Camping and picnicking areas (designated)
Other residential	Resorts and group camps
Motion picture production	Other cultural, entertainment, recreational activities
Correctional institutions	
Educational services	

Noise Area Classification 2 - Land Use Activities

Railroad terminals (passenger)	Retail trade - building materials
Railroad terminals (passenger and freight)	hardware
Rapid rail transit and street railway passenger terminals	farm equipment
Bus passenger terminals (intercity)	general merchandise
Bus passenger terminals (local)	food
Bus passenger terminals (intercity and local)	automotive & accessories
Other motor vehicle transportation	marine craft & accessories
Airport and flying field terminals (passenger)	aircraft & accessories
Airport and flying field terminals (passenger and freight)	apparel & accessories
Marine terminals (passenger)	furniture, home furnishings and equipment
Marine terminals (passenger and freight)	eating and drinking
Telegraph message centers	Other retail trade
Transportation services and arrangements	Finance, insurance, and real estate services
Wholesale trade	Personal services
Public assembly (except race tracks and entertainment assembly)	Business services
Recreational activities (except designated camping and picnicking areas)	Repair services
	Legal services
	Other professional services
	Contract construction services
	Governmental services (except correctional institutions)
	Miscellaneous services (except religious activities)
	Amusements (except fairgrounds and amusement parks)
	Parks
	Automobile parking

Noise Area Classification 3 - Land Use Activities

Food and kindred products	Marine craft transportation
- manufacturing	(except passenger and
Textile mill products	freight terminals)
- manufacturing	Highway and street right-of-way
Apparel and other finished	Communication (except
products made from fabrics,	telegraph message centers)
leather & similar materials	Utilities
- manufacturing	Other transportation,
Lumber and wood products	communication & utilities
(except furniture)	(except transportation
- manufacturing	services and arrangements)
Furniture and fixtures	Race tracks
- manufacturing	Fairgrounds and amusement parks
Paper and allied products	Agricultural
- manufacturing	Agricultural
Printing, publishing, and	and related activities
allied industries	Forestry activities and
Chemicals and allied products	related services
- manufacturing	(including commercial forest
Petroleum refining and	land, timber production, and
related industries	other related activities)
Rubber and miscellaneous	Fishing activities
plastic products	and related services
- manufacturing	Mining activities
Stone, clay, & glass products	and related services
- manufacturing	Other resource production
Primary metal industries	and extraction
Fabricated metal products	All other activities not
- manufacturing	otherwise listed
Professional, scientific, and	
controlling instruments;	
photographic & optical goods;	
watches and clocks	
- manufacturing	
Miscellaneous manufacturing	
(except motion picture	
production)	
Railroad, rapid transit,	
and street railway	
transportation (except	
passenger terminals)	
Motor vehicle transportation	
(except passenger terminals)	
Aircraft transportation	
(except passenger terminals)	

Noise Area Classification 4 - Land Use Activities

Undeveloped and unused land area  
(excluding noncommercial forest development)  
Noncommercial forest development  
Water areas  
Vacant floor area  
Under construction  
Other undeveloped land and water areas

Subp. 3. Exceptions. The noise area classification for a land use may be changed in the following ways if the applicable conditions are met.

A. The daytime standards for NAC-1 shall be applied to NAC-1 during the nighttime if the land use activity does not include overnight lodging.

B. The standards for a building in a NAC-2 shall be applied to a building in a NAC-1 if the following conditions are met:

- 1) the building is constructed in such a way that the exterior to interior sound level attenuation is at least 30 dB(A); and
- 2) the building has year-round climate control; and
- 3) the building has no areas or accommodations that are intended for outdoor activities.

C. The standards for a building in a NAC-3 shall be applied to a building in a NAC-1 if the following conditions are met:

- 1) the building is constructed in such a way that the exterior to interior sound level attenuation is at least 40 dB(A); and
- 2) the building has year-round climate control; and
- 3) the building has no areas or accommodations that are intended for outdoor activities.

D. The standards for a building in a NAC-3 shall be applied to a building in a NAC-2 if the following conditions are met:

- 1) the building is constructed in such a way that the exterior to interior sound level attenuation is at least 30 dB(A); and
- 2) the building has year-round climate control; and
- 3) the building has no areas or accommodations that are intended for outdoor activities.

Statutory Authority: MS s 116.07 subds 2,4

**7010.0060 MEASUREMENT METHODOLOGY.**

Subpart 1. Measurement location. Measurement of sound must be made at or within the applicable NAC at the point of human activity which is nearest to the noise source. All measurements shall be made outdoors.

Subp. 2. Equipment specifications. All sound level measuring devices must meet Type 0, I, II, or S specifications under American National Standards Institute S1.4-1983.

Subp. 3. Calibration. All sound level measuring devices must, at a minimum, be externally field calibrated before and after monitoring using a calibration device of known frequency and sound pressure level.

Subp. 4. Measurement procedures. The following procedures must be used to obtain representative sound level measurements:

A. Measurements must be made at least three feet off the ground or surface and away from natural or manmade structures which would prevent an accurate measurement.

B. Measurements must be made using the A-weighting and fast response characteristics of the sound measuring device as specified in American National Standards Institute S1.4-1983.

C. Measurements must not be made in sustained winds or in precipitation which results in a difference of less than ten decibels between the background noise level and the noise source being measured.

D. Measurements must be made using a microphone which is protected from ambient conditions which would prevent an accurate measurement.

Subp. 5. Data documentation. A summary sheet for all sound level measurements shall be completed and signed by the person making the measurements. At a minimum, the summary sheet shall include:

- A. date;
- B. time;
- C. location;
- D. noise source;
- E. wind speed and direction;
- F. temperature;
- G. humidity;
- H. make, model, and serial number of measuring equipment;
- I. field calibration results;
- J. monitored levels; and
- K. site sketch indicating noise source, measurement location, directions, distances, and obstructions.

**7010.0070 SOUND ATTENUATION MEASUREMENT METHODOLOGY.**

Subpart 1. Purpose. Sound level measurements made for assessing sound attenuation as specified in part 7010.0050, subpart 3, item B, C, or D, shall be made according to the requirements of this part.

Subp. 2. Equipment. The equipment shall meet the requirements specified in part 7010.0060, subpart 2.

Subp. 3. Calibration. The equipment must meet the calibration requirements specified in part 7010.0060, subpart 3.

Subp. 4. Measurement procedure. The measurement procedure described in FHWA-DP-45-1R, section 8 must be used for determination of the sound attenuation.

Subp. 5. Equivalent methods. Methods equivalent to those described in subpart 4 may be used provided they are approved by the director of the Minnesota Pollution Control Agency. The director shall approve an alternative method if the director finds that the method will produce representative data and results which are as reliable as the methods specified in subp 4.

**Statutory Authority: MS s 116.07 subds 2,4**

**7010.0080 VARIANCE.**

If, upon written application of the responsible person, the agency finds that by reason of exceptional circumstances strict conformity with any provisions of any noise rule would cause undue hardship, would be unreasonable, impractical, or not feasible under the circumstances, the agency may permit a variance upon the conditions and within the time limitations as it may prescribe for the prevention, control, or abatement of noise pollution in harmony with the intent of the state and any applicable federal laws.

**Statutory Authority: MS s 116.07 subds 2,4**

**REPEALER.**

Minnesota Rules, parts 7010.0100, 7010.0200, 7010.0300, 7010.0400, 7010.0500, 7010.0600, 7010.0700 are repealed.

May 87

NTP-2 TEST PROCEDURE  
MANUAL METHOD FOR  
THE MEASUREMENT OF NON-IMPULSIVE NOISE

The following test procedure has been approved by the Executive Director of the Minnesota Pollution Control Agency for the manual measurement of non-impulsive noise.

A. INSTRUMENTATION:

- 1) a sound level meter and microphone conforming to type 0, 1, 2, or S specifications under ANSI S1.4-1983;
- 2) a calibrator of known frequency and level;
- 3) a small screwdriver for sensitivity adjustment;
- 4) microphone windscreen;
- 5) noise survey form and sample sheet;
- 6) tripod (optional).

B. METEOROLOGY:

- 1) Measurements must not be made in sustained winds or in precipitation which results in a difference of less than ten decibels between the background noise level and the noise source being measured;
- 2) Temperature and/or humidity conditions must be within the equipment manufacturer's specifications.

C. LOCATION:

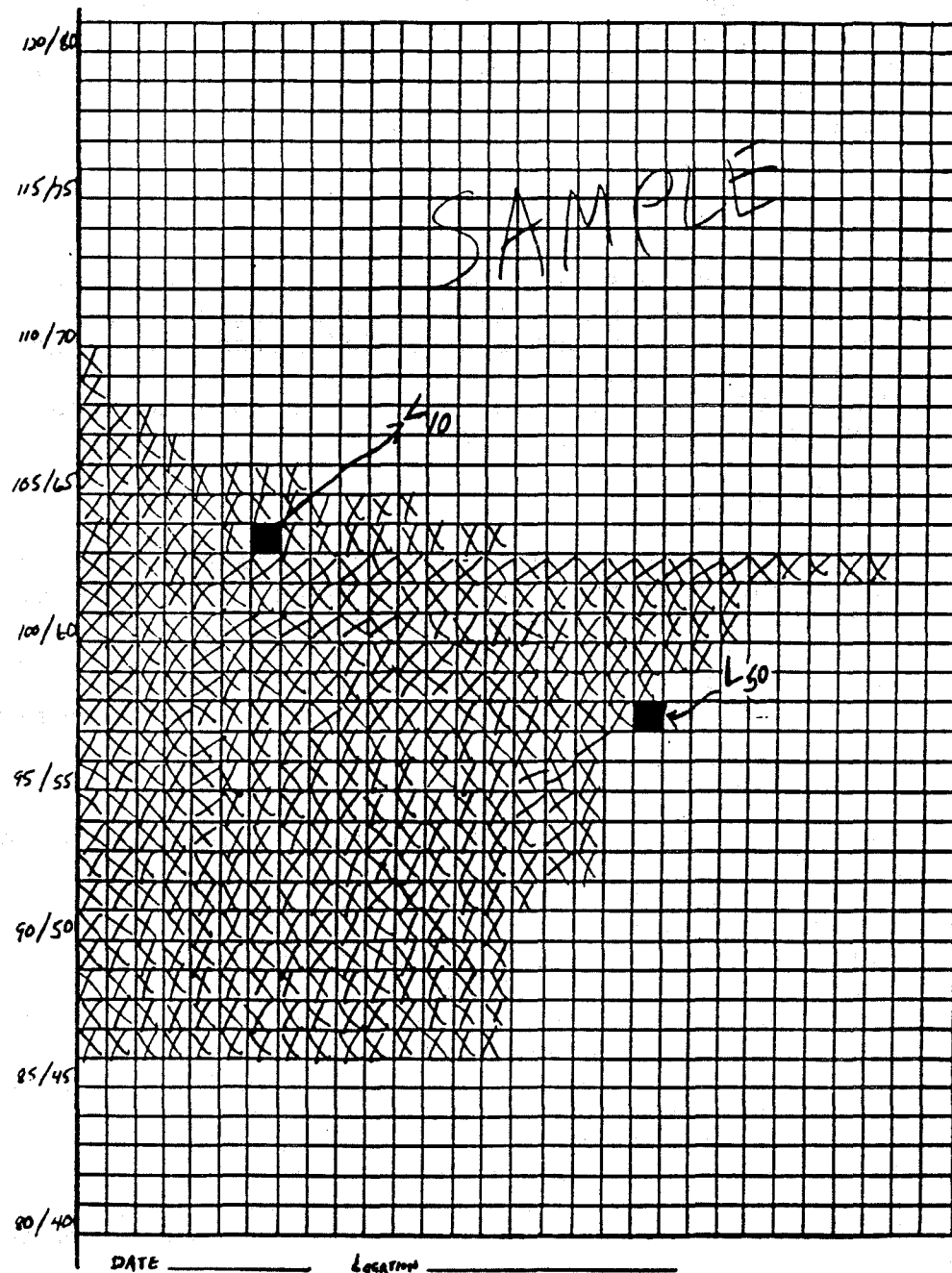
- 1) Measurements must be made at or within the applicable NAC at the point of human activity nearest the noise source;
- 2) Measurements must be made outdoors;
- 3) Measurements must be made at least three feet off the ground and away from natural or manmade structures which would prevent an accurate measurement (barriers, houses).

D. SURVEY PROCEDURE:

- 1) Monitoring must be conducted for at least a one hour time period;
- 2) Calibration must be performed before and after the monitoring period. Adjustments made if necessary;
- 3) Sound measuring devices must use the "A" weighting and FAST response characteristics;
- 4) Background noise must be at least ten decibels lower than the noise source being measured;
- 5) A Survey Form must be completed containing the date, time, location, noise source, wind speed/direction, temperature, humidity, equipment information (make, model, serial #), site sketch with the location of the noise source and measurement location (including appropriate distances), data and calibration information. A sample Survey Form is attached.

E. MANUAL MONITORING PROCEDURE;

- 1) Using a hand held sound level meter, take an instantaneous sound reading every ten seconds and record on a "sample sheet." An example of a "sample sheet" is attached;
- 2) Continue taking sound readings for one hour which will give you 360 individual readings;
- 3) To determine the L10, take the 36th loudest (10% of 360 = 36) individual sound reading by counting from the loudest to the quietest on the "sample sheet." In the example attached, the L10 = 63 and is the 36th X from the top of the sheet;
- 4) To determining the L50, take the 180th loudest (50% of 360 = 180) individual sound reading. In the example attached, the L50 = 57 and represents the 180th X from the top of the sheet.









## NEW JERSEY NOISE REGULATIONS



NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

NEW JERSEY ADMINISTRATIVE CODE

TITLE 7, CHAPTER 29

SUBCHAPTER 1

NOISE CONTROL

Effective: January 18, 1974

Revision Effective: March 18, 1985

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- 7:29-1.2 Industrial, commercial, public service, or community service facilities
- 7:29-1.3 Stationary emergency signaling devices
- 7:29-1.4 Exceptions
- 7:29-1.5 Performance test principle

SUBCHAPTER I. GENERAL PROVISIONS

7:29-1.1 Definitions

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

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

1. Banking and other financial institutions;
2. Dining establishments;
3. Establishments for providing retail services;
4. Establishments for providing wholesale services;
5. Establishments for recreation and entertainment;
6. Office buildings;
7. Transportation;
8. Warehouses.

"Community service facility" means any non-residential facility used to provide services to the public, including but not limited to:

1. Club meeting halls, offices and facilities;
2. Organization offices and facilities;
3. Facilities for the support and practice of religion;
4. Private and parochial schools.

"Continuous airborne sound" means sound that is measured by the slow response setting of a sound level meter in accordance with the provisions of N.J.A.C. 7:29B-1.

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

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

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

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

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

"Industrial facility" means any activity and its related premises, property, facilities, or equipment involving the fabrication, manufacture, or production of durable or nondurable goods.

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

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

"Person" means any individual, public or private corporation, political subdivision, governmental agency, department or bureau of the State, municipality, industry, copartnership, or association.

"Public service facility" means any facility and its related premises, property, or equipment used to provide governmental services to the public including, but not limited to:

1. Maintenance centers;
2. Offices and buildings of agencies or instrumentalities of government;
3. Schools;
4. Waste collection centers;
5. Waste recycling centers;
6. Water and sewage facilities.

"Residential property" means property used for human habitation, including but not limited to:

1. Private property used for human habitation;
2. Commercial living accommodations and commercial property used for human habitation;
3. Recreational and entertainment property used for human habitation;
4. Community service property used for human habitation.

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

"Sound level meter" means an instrument used in accordance with the provisions of N.J.A.C. 7:29B-1 to measure sound pressure level, sound level, octave band sound pressure level, or peak sound pressure level, separately or in any combinations thereof.

"Sound pressure level" means the level of a sound measured in dB units with a sound level meter which has a uniform ("flat") response over the band of frequencies measured.

"Stationary emergency signaling device" means any device, excluding those attached to motor vehicles, used to alert persons engaged in emergency operations. These include, but are not limited to, fire-fighters, first aid squad members, and law enforcement officers, whether paid or volunteer.

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

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

1. From 7:00 A.M. to 10:00 P.M.:
  - i. Continuous airborne sound which has a sound level in excess of 65 dBA; or

- ii. Continuous airborne sound which has an octave band sound pressure level in decibels which exceeds the values listed below in one or more octave bands:

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

; or

- iii. Impulsive sound in air which has a peak sound pressure level in excess of 80 decibels.

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

- i. Continuous airborne sound which has a sound level in excess of 50 dBA; or

- ii. Continuous airborne sound which has an octave band sound pressure level in decibels which exceeds the values listed below in one or more octave bands:

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

; or

- iii. Impulsive sound in air which has a peak sound pressure level in excess of 80 decibels.



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

1. Continuous airborne sound which has a sound level in excess of 65 dBA; or
2. Continuous airborne sound which has an octave band sound pressure level in decibels which exceeds the values listed below in one or more octave bands:

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

;or

3. Impulsive sound in air which has a peak sound pressure level in excess of 80 decibels.

#### 7:29-1.3 Stationary emergency signaling devices

(a) Testing of only the electromechanical functioning of a stationary emergency signaling device shall occur at the same time each day that a test is performed, but not before 8:00 A.M. or after 8:00 P.M. Any such testing shall only use the minimum cycle test time. Except as provided for in subsection (b) below, such test time shall not exceed ten seconds.

(b) Testing of the complete emergency signaling system including the electromechanical functioning of the signaling device and the personnel response to the signal shall not occur more than once in each calendar month. Such testing shall not occur before 8:00 A.M. or after 8:00 P.M. The ten second time limit on the electromechanical functioning of the signaling device shall not apply to such system testing.

(c) Stationary emergency signaling devices shall be used only for testing in compliance with applicable provisions of these regulations and for emergency purposes where personnel and equipment are mobilized.

#### 7:29-1.4 Exceptions

(a) The operational performance standards established in this subchapter shall not apply to any of the following noise sources:

1. Agriculture;
2. Bells, chimes or carillons while being used in conjunction with religious services;
3. Emergency energy release devices;
4. Emergency work to provide electricity, water or other public utilities when public health or safety is involved;
5. Motor vehicle race tracks;
6. National Warning System (NAWAS): Systems used to warn the community of attack or imminent public danger such as flooding or explosion. These systems are controlled by the New Jersey Office of Emergency or Hazardous Spill Management, Division of State Police;
7. Noise of aircraft flight operations;
8. Public celebrations;
9. Public roadways;
10. Surface carriers engaged in commerce by railroad;
11. The unamplified human voice;
12. Use of explosive devices: These are regulated by the New Jersey Department of Labor under the 1960 Explosive Act (N.J.S.A. 21:1A-1 to 21:1A-144).

#### 7:29-1.5 Performance test principle

For the purposes of measuring sound in accordance with the applicable provisions of these regulations, test equipment methods and procedures shall conform to the provisions of N.J.A.C. 7:29B-1.

## OREGON NOISE REGULATIONS



OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Noise Control Regulations

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DEQ Offices

Noise Control Program Headquarters Office:

811 S. W. Sixth Avenue, Portland, OR 97204; Phone: 229-6085 or toll-free  
at 1-800-452-4011

Northwest Region Office:

811 S. W. Sixth Avenue, Portland, OR 97204; Phone: 229-5263  
Responsible for: Clackamas, Clatsop, Columbia, Lincoln, Multnomah,  
Tillamook, and Washington Counties

Willamette Valley Region Office:

895 Summer, N. E., Salem, OR 97310; Phone: 378-8240  
Responsible for: Benton, Lane, Linn, Marion, Polk, and Yamhill Counties

Southwest Region Office:

201 W. Main Street, Medford, OR 97501; Phone: 776-6010  
Responsible for: Jackson and Josephine Counties

Roseburg Branch Office:

1937 W. Harvard, Roseburg, OR 97470; Phone: 440-3338  
Responsible for: Douglas County

Coos Bay Branch:

490 N. Second, Coos Bay, OR 97420; Phone: 269-2721  
Responsible for: Coos and Curry Counties

Eastern Region Office:

700 S. E. Emigrant, Suite 330, Pendleton, OR 97801; Phone: 276-4063  
Responsible for: Baker, Gilliam, Grant, Malheur, Morrow, Umatilla, Union,  
Wallowa, and Wheeler Counties

Central Region Office:

2150 N. E. Studio Road, Bend, OR 97701; Phone: 388-6146  
Responsible for: Crook, Deschutes, Harney, Hood River, Jefferson, Klamath,  
Lake, Sherman, and Wasco Counties

DEPARTMENT OF ENVIRONMENTAL QUALITY  
CHAPTER 340, OREGON ADMINISTRATIVE RULES

DIVISION 35

NOISE CONTROL REGULATIONS

AMENDED APRIL 1983

General

Policy

340-35-005 In the interest of public health and welfare, and in accordance with ORS 467.010, it is declared to be the public policy of the State of Oregon:

(1) To provide a coordinated state-wide program of noise control to protect the health, safety, and welfare of Oregon citizens from the hazards and deterioration of the quality of life imposed by excessive noise emissions;

(2) To facilitate cooperation among units of state and local governments in establishing and supporting noise control programs consistent with the State program and to encourage the enforcement of viable local noise control regulations by the appropriate local jurisdiction;

(3) To develop a program for the control of excessive noise sources which shall be undertaken in a progressive manner, and each of its objectives shall be accomplished by cooperation among all parties concerned.

Exceptions

340-35-010 (1) Upon written request from the owner or controller of a noise source, the Department may authorize exceptions as specifically listed in these rules.

(2) In establishing exceptions, the Department shall consider the protection of health, safety, and welfare of Oregon citizens as well as the feasibility and cost of noise abatement, the past, present, and future patterns of land use; the relative timing of land use changes and other legal constraints. For those exceptions which it authorizes, the Department shall specify the times during which the noise rules can be exceeded and the quantity and quality of the noise generated, and when appropriate shall specify the increments of progress of the noise source toward meeting the noise rules.

Definitions

340-35-015 As used in this division:

(1) "Air Carrier Airport" means any airport that serves air carriers holding Certificates of Public Convenience and

Necessity issued by the Civil Aeronautic Board.

(2) "Airport Master Plan" means any long-term development plan for the airport established by the airport proprietor.

(3) "Airport Noise Abatement Program" means a Commission-approved program designed to achieve noise compatibility between an airport and its environs.

(4) "Airport Proprietor" means the person who holds title to an airport.

(5) "Ambient Noise" means the all-encompassing noise associated with a given environment, being usually a composite of sounds from any sources near and far.

(6) "Annual Average Day-Night Airport Noise Level" means the average, on an energy basis, of the daily Day-Night Airport Noise Level over a 12-month period.

(7) "Any one hour" means any period of 60 consecutive minutes during the 24-hour day.

(8) "Closed Course Motorcycle Racing Vehicle" means any motorcycle racing vehicle that is operated in competition or practice session on a closed course motor sports facility, i.e. where public access is restricted and admission is generally charged.

(9) "Commission" means the Environmental Quality Commission.

(10) "Construction" shall mean building or demolition work and shall include all activities thereto such as clearing of land, earthmoving, and landscaping, but shall not include the production of construction materials.

(11) "Day-Night Airport Noise Level (Ldn)" means the Equivalent Noise Level produced by airport/aircraft operations during a 24-hour time period, with a 10 decibel penalty applied to the level measured during the nighttime hours of 10 pm to 7 am.

(12) "Department" means the Department of Environmental Quality.

(13) "Director" means the Director of the Department.

(14) "Drag Racing Vehicle" means any racing vehicle used to compete in any acceleration competition initiated from a standing start and continued over a straight line course.

(15) "Emergency Equipment" means noise emitting devices required to avoid or reduce severity of accidents. Such equipment includes, but is not limited to, safety valves and other unregulated pressure relief devices.

(16) "Equivalent Noise Level (Leq)" means the equivalent steady state sound level in A-weighted decibels for a stated period of time which contains the same acoustic energy as the actual time-varying sound level for the same period of time.

(17) "Existing Industrial or Commercial Noise Source" means any Industrial or Commercial Noise Source for which installation or construction was commenced prior to January 1, 1975.

(18) "Farm Tractor" means any Motor Vehicle designed primarily for use in agricultural operations for drawing or operating plows, mowing machines, or other implements of husbandry.

(19) "Four Wheel Drive Racing Vehicle" means any four-wheeled racing vehicle with at least one wheel on the front and rear axle driven by the engine or any racing vehicle participating in an event with predominantly four wheel drive racing vehicles.

(20) "Go-Kart Racing Vehicle" means a light-weight four-wheeled racing vehicle of the type commonly known as a go-kart.

(21) "Impulse Sound" means either a single pressure peak or single burst (multiple pressure peaks) for a duration of less than one second as measured on a peak unweighted sound pressure measuring instrument or "C" weighted, slow response instrument and specified by dB and dBC respectively.

(22) "In-Use Motor Vehicle" means any Motor Vehicle which not a New Motor Vehicle.

(23) "Industrial or Commercial Noise Source" means that source of noise which generates Industrial or Commercial Noise Levels.

(24) "Industrial or Commercial Noise Levels" means those noises generated by a combination of equipment, facilities, operations, or activities employed in the production, storage, handling, sale, purchase, exchange, or maintenance of a product commodity, or service and those noise levels generated in the storage or disposal of waste products.

(25) "Motorboat" as used in OAR 340-35-025 means a watercraft propelled by an internal combustion engine but does not include a boat powered by an outboard motor or an inboard/outboard power package designed to exhaust beneath the surface of the water.

(26) "Motorcycle" means any Motor Vehicle, except Farm Tractors, designed to travel on not more than three wheels which are in contact with the ground.

(27) "Motor Sports Advisory Committee" means a committee appointed by the Director, from among the nominees, for the purpose of technical advice on racing activities and to recommend Exceptions to these rules as specified in OAR 340-35-040(12). This Committee shall consist of:

(a) One permanent public member nominated by a noise impacted group or association; and

(b) One representative of each of the racing vehicle types identified in OAR 340-35-040(2) as nominated by the respective sanctioning bodies; and

(c) The program manager of the Department's noise pollution control section who shall also serve as the departmental staff liaison to this body; and



- (d) An attorney; and
- (e) An acoustical engineer.
- (28) "Motor Sports Facility" means any facility, track or course upon which racing events are conducted.
- (29) "Motor Sports Facility Noise Impact Boundaries" means the daily 55 dBA day-night (Ldn) noise contours around the motor sports facility representing events that may occur on the day of maximum projected use.
- (30) "Motor Sports Facility Owner" means the owner or operator of a motor sports facility or an agent or designee of the owner or operator. When a Racing Event is held on public land, the event organizer (i.e., promoter) shall be considered the motor sports facility owner for the purposes of these rules.
- (31) "Motor Vehicle" means any vehicle which is, or is designed to be self-propelled or is designed or used for transporting persons or property. This definition excludes airplanes, but includes watercraft.
- (32) "New Airport" means any airport for which installation, construction, or expansion of a runway commenced after January 1, 1980.
- (33) "New Industrial or Commercial Noise Source" means any Industrial or Commercial Noise Source for which installation or construction was commenced after January 1, 1975 on a site not previously occupied by the industrial or commercial noise source in question.
- (34) "New Motor Sports Facility" is any permanent motor sport facility for which construction or installation was commenced after January 1, 1982. Any recreational park or similar facility which initiates sanctioned racing after this date shall be considered a motor sports facility.
- (35) "New Motor Vehicle" means a Motor Vehicle whose equitable legal title has never been transferred to a Person who in good faith purchases the New Motor Vehicle for purposes other than resale. The model year of such vehicle shall be the year so specified by the manufacturer, or if not so specified, the calendar year in which the new motor vehicle was manufactured.
- (36) "Noise Impact Boundary" means a contour around the airport any point on which is equal to the airport noise criterion.
- (37) "Noise Level" means weighted Sound Pressure Level measured by use of a metering characteristic with an "A" frequency weighting network and reported as dBA.
- (38) "Noise Sensitive Property" means real property normally for sleeping, or normally used as schools, churches, hospitals or public libraries. Property used in industrial or agricultural activities is not Noise Sensitive Property unless it meets the above criteria in more than an incidental manner.
- (39) "Octave Band Sound Pressure Level" means the sound pressure level for the sound being measured within the specified octave band. The reference pressure is 20 micropascals (20 micronewtons per square meter).

(40) "Off-Road Recreational Vehicle" means any Motor Vehicle including watercraft, used off Public Roads for recreational purposes. When a Road Vehicle is operated off-road, the vehicle be considered an Off-Road Recreational Vehicle if it is being operated for recreational purposes.

(41) "One-Third Octave Band Sound Pressure Level" means the pressure level for the sound being measured within the specified third octave band at the Preferred Frequencies. The reference pressure is 20 micropascals (20 micronewtons per square meter).

(42) "Open Course Motorcycle Racing Vehicle" means any motorcycle racing vehicle that is operated in competition on an open course sports facility, i.e. where public access is not generally restricted. This definition is intended to include the several of motorcycles such as "enduro" and "cross country" that are used in events held in trail or other off-road environments.

(43) "Oval Course Racing Vehicle" means any racing vehicle motorcycle and not a sports car, which is operated upon a closed type motor sports facility.

(44) "Person" means the United States Government and agency thereof, any state, individual, public or private corporation, political subdivision, governmental agency, municipality, industrial partnership, association, firm, trust, estate, or any other legal entity whatever.

(45) "Practice Sessions" means any period of time during which racing vehicles are operated at a motor sports facility, other than during racing events. Driver training sessions or similar activities which are not held in anticipation of a subsequent racing event, which include only vehicles with a stock exhaust system, shall not be considered practice sessions.

(46) "Preferred Frequencies" means those mean frequencies in Hertz preferred for acoustical measurements which for this purpose shall 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.

(47) "Previously Unused Industrial or Commercial Site" means property which has not been used by any industrial or commercial noise source during the 20 years immediately preceding commencement of construction of a new industrial or commercial source on that property. Agricultural activities and silvicultural activities generating infrequent noise emissions shall not be considered as industrial or commercial operations for the purpose of this definition.

(48) "Propulsion Noise" means that noise created in the propulsion of a Motor Vehicle. This includes, but is not limited to exhaust system noise, induction system noise, tire noise, cooling system noise, aerodynamic noise and where appropriate in the test procedure, braking system noise. This does not include noise created by Road Vehicle Auxiliary Equipment such as power take-offs and compressors.

(49) "Public Roads" means any street, alley, road, highway, freeway, thoroughfare, or section thereof in this state used by the public or dedicated or appropriated to public use.

(50) "Quiet Area" means any land or facility designated by the Commission as an appropriate area where the qualities of serenity, tranquility, and quiet are of extraordinary significance and serve an important public need, such as, without being limited to, a wilderness area, national park, state park, game reserve, wildlife breeding area or amphitheater. The Department shall submit areas suggested by the public as Quiet Areas, to the Commission, with the Department's recommendation.

(51) "Racing Event" means any time, speed or distance competition using motor vehicles conducted under a permit issued by the governmental authority having jurisdiction, or under the auspices of a recognized sanctioning body. This definition includes, but is not limited to, events on the surface of land and water. Any motor sports event not meeting this definition shall be subject to the ambient noise limits of OAR 340-35-030(1)(d).

(52) "Racing Vehicle" means any Motor Vehicle that is designed to be used exclusively in Racing Events or any New Motor Vehicle that has not been certified by its manufacturer as meeting the applicable noise limits of OAR 340-35-025 or any vehicle participating in or practicing for a Racing Event.

(53) "Recreational Park" means a facility open to the public for the operation of off-road recreational vehicles.

(54) "Road Vehicle" means any Motor Vehicle registered for use on Public Roads, including any attached trailing vehicles.

(55) "Road Vehicle Auxiliary Equipment" means those mechanical devices which are built in or attached to a Road Vehicle and are used primarily for the handling or storage of products in that Motor Vehicle. This includes, but is not limited to, refrigeration units, compressors, compactors, chippers, power lifts, mixers, pumps, blowers, and other mechanical devices.

(56) "Sound Pressure Level (SPL)" means 20 times the logarithm to the base 10 of the ratio of the root-mean-square pressure of the sound to the reference pressure. SPL is given in decibels (dB). The reference pressure is 20 micropascals (20 micronewtons per square meter).

(57) "Special Motor Racing Event" means any racing event in which a substantial or significant number of out-of-state racing vehicles are competing or any event which has a special significance to the community and which has been recommended as a special motor racing event by the motor sports advisory committee approved by the Department.

(58) "Sports Car Racing Vehicle" means any racing vehicle which meets the requirements and specifications of the competition rules of any sports car organization.

(59) "Statistical Noise Level" means the Noise Level which is equalled or exceeded a stated percentage of the time.

An  $L_{10} = 65$  dBA implies that in any hour of the day 65 dBA can be equalled or exceeded only 10 percent of the time, or for six minutes.

(60) "Stock Exhaust System" means an original equipment manufacturer exhaust system or a replacement for original equipment for a street legal vehicle whose noise emissions do not exceed those of the original equipment.

(61) "Temporary Autocross or Solo Course" means any area upon which a paved course motor sports facility is temporarily established. Typically such courses are placed on parking lots or other large paved areas, for periods of one or two days.

(62) "Top Fuel-Burning Drag Racing Vehicle" means a drag racing vehicle that operates using principally alcohol (more than 50 percent) or utilizes nitromethane as a component of its operating fuel and commonly known as top fuel and funny cars.

(63) "Trackside" means a sound measuring point of 50 feet from the racing vehicle and specified in Motor Race Vehicle and Facility Sound Measurement and Procedure Manual, NPC-35.

(64) "Warning Device" means any device which signals an unsafe or potentially dangerous situation.

(65) "Watercraft Racing Vehicle" means any racing vehicle which is operated upon or immediately above the surface of water.

(66) "Well Maintained Muffler" means a device or combination of devices which effectively decreases the sound energy of internal combustion engine exhaust without a muffler by a minimum of 5 dBA at trackside. A well maintained muffler shall be free of defects or modifications that reduce its sound reduction capabilities. Each outlet of a multiple exhaust system shall comply with the requirements of this subsection, notwithstanding the total engine displacement versus muffler length requirements. Such a muffler shall be a:

(a) Reverse gas flow device incorporating a multitube and baffle design; or a

(b) Perforated straight core device, fully surrounded from beginning to end with a sound absorbing medium, not installed on a rotary engine, and:

(A) at least 20 inches in inner core length when installed on any drag race engine exceeding 1600 cc (96.7 cubic inches) displacement; or

(B) at least 12 inches in inner core length when installed on any non-motorcycle drag race engine equal to or less than 1600 cc (96.7 cubic inches) displacement; or

(C) at least 6 inches in inner core length and installed at the outlet end of any four-cycle motorcycle drag race engine

(D) at least 8 inches in inner core length when installed on any two-cycle motorcycle drag race engine; or an

(c) Annular swirl flow (auger-type) device of:

(A) at least 16 inches in swirl chamber length when installed on any drag race engine exceeding 1600 cc (96.7 cubic inches) displacement; or

(B) at least 10 inches in swirl chamber length when installed on any drag race engine equal to or less than 1600 cc (96.7 cubic inches) displacement; or a

(d) Stacked 360° diffuser disc device; or a

(e) Turbocharger; or a

(f) Go-Kart muffler as defined by the International Karting Federation as specified in Motor Race Vehicle and Facility Sound Measurement and Procedure Manual, NPC-35; or an

(g) Original equipment manufacturer motorcycle muffler when installed on a motorcycle model such muffler was designated for by the manufacturer; or

(h) Boat motor whose exhaust exits beneath the water surface during operation; or a

(i) Formula Vee four-into-one header/collector when installed on a Formula Vee sports car racing vehicle; or a

(j) Hughes-type Racing muffler; or

(k) Any other device demonstrated effective and approved by the motor sports advisory committee and the Department.

#### Noise Control Regulations for the Sale of New Motor Vehicles

340-35-025 (1) Standards and Regulations:

(a) No person shall sell or offer for sale any new motor vehicle designated in this section which produces a propulsion noise exceeding the noise limits specified in Table 1, except as otherwise provided in these rules.

(b) Subsequent to the adoption of a Federal Environmental Protection Agency procedure to determine sound levels of passenger cars and light trucks, or a nationally accepted procedure for these vehicles not similar to those specified and approved under subsection (2)(a), the Department shall conduct an evaluation under such new procedure.

(c) After an appropriate evaluation of noise emission data measured under the procedure specified under subsection (1)(b), the Department shall make recommendations to the Commission on the adequacy of the procedure and the necessity of amendments to this rule for incorporation of the procedure and associated standards.

(d) No person shall sell or offer to sell any new motorcycle new motorcycle exhaust sytem or new motorcycle exhaust system component manufactured after January 1, 1983 unless the motorcycle exhaust sytem, or exhaust component is properly labeled or marked accordance with Federal noise regulations specified in Part 205 Subpart E of Title 40 of the Code of Federal Regulations.

(2) Measurement:

(a) Sound measurements shall conform to test procedures adopted by the Commission in Motor Vehicle Sound Measurement Procedures Manual (NPC-21), or to standard methods approved in writing by the Department. These measurements will generally

be carried out by the motor vehicle manufacturer on a sample of either prototype or production vehicles. A certification program shall be devised by the manufacturer and submitted to the Department for approval within 60 days after the adoption of this rule.

(b) Nothing in this section shall preclude the Department from conducting separate or additional noise level tests and measurements on new motor vehicles being offered for sale. Therefore, when requested by the Department, a new motor vehicle dealer or manufacturer shall cooperate in reasonable noise testing of a specific class of motor vehicle being offered for sale.

(3) Manufacturer's Certification:

(a) Prior to the sale or offer for sale of any new motor vehicle designated in Table 1, the manufacturer or a designated representative shall certify in writing to the Department that vehicles listed in Table 1 made by that manufacturer and offered for sale in the State of Oregon meet applicable noise limits. Such certification will include a statement by the manufacturer that:

(A) The manufacturer has tested sample or prototype vehicles.

(B) That such samples or prototypes met applicable noise limits when tested in accordance with the procedures specified

(C) That vehicles offered for sale in Oregon are substantially identical in construction to such samples or prototypes.

(b) Nothing in this section shall preclude the Department from obtaining specific noise measurement data gathered by the manufacturer on prototype or production vehicles for a class of vehicles for which the Department has reasonable grounds to believe is not in conformity with the applicable noise limits.

(4) Exceptions. Upon prior written request from the manufacturer or designated representative, the Department may authorize an exception to this noise rule for a class of motor vehicles, if it can be demonstrated to the Department that for that specific class a vehicle manufacturer has not had adequate lead-time or does not have the technical capability to either bring the motor vehicle noise into compliance or to conduct new motor vehicle noise tests.

(5) Exemptions:

(a) All racing vehicles, except racing motorcycles, and racing motorboats, shall be exempt from the requirements of this section provided that such vehicles are operated only at facilities used for sanctioned racing events.

(b) Racing motorcycles and racing motorboats shall be exempt from the requirements of this section provided that racing motorcycles are operated only at facilities used for sanctioned racing events, racing motorboats are operated only at areas designated by the State Marine Board for testing or at an approved racing event, and the following conditions are complied with.

with:

(A) Prior to the sale of a racing motorcycle or racing motorboat, the prospective purchaser shall file a notarized affidavit with the Department, on a Departmentally approved form, stating that it is the intention of such prospective purchaser to operate the vehicle only at facilities used for sanctioned racing events; and

(B) No racing vehicle shall be displayed for sale in the State of Oregon without notice prominently affixed thereto:

(i) That such vehicle will be exempt from the requirements of this section only upon demonstration to the Department that the vehicle will be operated only at facilities used for sanctioned racing events; and

(ii) That a notarized affidavit will be required of the prospective purchaser stating that it is the intention of such prospective purchaser to operate the vehicle only at facilities used for sanctioned racing events; and

(C) No racing vehicle shall be locally advertised in the State of Oregon as being for sale without notice included:

(i) which is substantially similar to that required in (B)(i) and (B)(ii) above, and

(ii) Which is unambiguous as to which vehicle such notice applies.

#### Noise Control Regulations for In-Use Motor Vehicles

340-35-030 (1) Standards and Regulations:

(a) Road Vehicles

(A) No person shall operate any road vehicle which exceeds the noise level limits specified in Table 2 or in such a manner to exceed the noise level limits specified in Table 3, except as otherwise provided in these rules.

(B) No person shall operate a road vehicle with any of the following defects:

(i) No muffler

(ii) Leaks in the exhaust system

(iii) Pinched outlet pipe

(C) Non-conforming "classic" and other "special interest" vehicles may be granted an exception to this rule, pursuant to Rule 340-35-010, for the purpose of maintaining authentic equipment.

(b) Off-Road Recreational Vehicles.

(A) No person shall operate any off-road recreational vehicle which exceeds the stationary noise level limits specified Table 4 or in such a manner as to exceed the moving vehicle noise level limits specified in Table 4.

(B) No person shall operate an off-road recreational vehicle with any of the following defects:

(i) No muffler

(ii) Leaks in the exhaust system

(iii) Pinched outlet pipe

(c) Trucks Engaged in Interstate Commerce. Motor vehicles

with a GVWR or GCWR in excess of 10,000 pounds which are engaged in interstate commerce by trucking and are regulated by Part 202 of Title 40 of the Code of Federal Regulations, promulgated pursuant to Section 17 of the Noise Control Act of 1972, 86 Stat. 1248, Public Law 92-574, shall be:

(A) Free from defects which adversely affect sound reduction;

(B) Equipped with a muffler or other noise dissipative device;

(C) Not equipped with any "cut-out" devices, "by-pass" devices, or any other similar devices; and

(D) Not equipped with any tire which as originally manufactured or newly retreaded having a tread pattern composed primarily of cavities in the tread, excluding sipes and local chunking, not vented by grooves to the tire shoulder or vented circumferentially to each other around the tire.

(d) Ambient Noise Limits.

(A) No person shall cause, allow, permit, or fail to control the operation of motor vehicles, including motorcycles, on property which he owns or controls, nor shall any person operate any such motor vehicle if the operation thereof increases the ambient noise level such that the appropriate noise level specified in Table 5 is exceeded as measured from either of the following points, if located within 1000 feet (305 meters) of the motor vehicle:

(i) Noise sensitive property, or

(ii) A quiet area.

(B) Exempt from the requirements of this subsection shall be:

(i) Motor vehicles operating in racing events;

(ii) Motor vehicles initially entering or leaving property which is more than 1000 feet (305 meters) from the nearest noise sensitive property or quiet area;

(iii) Motor vehicles operating on public roads; and

(iv) Motor vehicles operating off-road for non-recreational purposes.

(e) Auxiliary Equipment Noise Limits.

(A) No person shall operate any road vehicle auxiliary equipment which exceeds the noise limits specified in Table 6, as otherwise provided in these rules.

(B) No person shall cause, allow, permit, or fail to control the operation of any road vehicle auxiliary equipment that exceeds 50 dBA for more than 30 minutes between 10 p.m. and 7 a.m. at any appropriate noise sensitive property measurement as specified in OAR 340-35-035 (3)(b).

(f) Motorcycles manufactured after December 31, 1982 to Federal Noise Regulations (40 CFR Part 205):

(A) No person shall remove or render inoperative, or cause to be removed or rendered inoperative, other than for the purpose of maintenance, repair, or replacement of any device or element of incorporated in the motorcycle for the purpose of noise control



(B) No person shall remove or deface any noise label or mark required by Federal law which is affixed to any motorcycle or motorcycle part for purposes of identifying the motorcycle or motorcycle part as a federally regulated product.

(C) No person shall operate any road or off-road motorcycle manufactured to federal noise law that does not bear a label or mark on the exhaust system that matches the model specific code of the motorcycle on which the system is installed.

(D) No person shall operate, nor shall any person cause, all permit or fail to control the operation of any competition motorcycle identified for "competition use only" by the noise label or mark required by federal law on any property other than a motor sports facility in a practice session or a racing event.

(E) No person shall operate, nor shall any person cause, all permit or fail to control the operation of any motorcycle fitted with exhaust system or exhaust system component identified for "competition motorcycles only" by the noise label or mark required by federal law on any property other than a motor sports facility in a practice session or a racing event.

(2) Measurement. Sound measurement shall conform to test procedures adopted by the Commission in Sound Measurement Procedures Manual (NPCS-1) and Motor Vehicle Sound Measurement Procedures Manual (NPCS-21) or to standard methods approved in writing by the Department.

(3) Exemptions:

(a) Motor Vehicles registered as antique or historical motor vehicles licensed in accordance with ORS 481.205(4) are exempt from these regulations.

(b) Motor vehicle warning devices are exempt from these regulations.

(c) Vehicles equipped with at least two snowtread tires are exempt from the noise limits of Table 3.

(d) Motor vehicles described in subsection (1)(c), which are demonstrated by the operator to be in compliance with the noise levels in Table 3, for operation greater than 35 mph, are exempt from these regulations.

(e) Auxiliary equipment operated on construction sites or in the maintenance of capital equipment or to avoid or reduce the severity of accidents or operated on a farm for agricultural purpose or operated on forest land as defined in Subsection (1) of ORS 526 for activities related to the growing or harvesting of forest tree species are exempt from these regulations.

(4) Equivalency:

(a) The in-use motor vehicle standards specified in Table 2 and Table 3 have been determined by the Department to be substantially equivalent to the 25 foot stationary test standards set forth in Oregon Laws Chapter 273 (ORS 483.449).

(b) Tests shall be conducted according to the procedures in Motor Vehicle Sound Measurement Procedures Manual (NPCS-21) or to standard methods approved in writing by the Department.

Noise Control Regulations for Industry and Commerce

340-35-035 (1) Standards and Regulations:

(a) Existing Noise Sources. No person owning or controlling an existing industrial or commercial noise source shall cause or permit the operation of that noise source if the statistical noise levels generated by that source and measured at an appropriate measurement point, specified in subsection (3)(b) of this section, exceed the levels specified in Table 7, except as otherwise provided in these rules.

(b) New Noise Sources.

(A) New Sources Located on Previously Used Sites. No person owning or controlling a new industrial or commercial noise source located on a previously used industrial or commercial site shall cause or permit the operation of that noise source if the statistical noise levels generated by that new source as measured at an appropriate measurement point, specified in subsection (3)(b) of this section, exceed the levels specified in Table 8, except as otherwise provided in these rules.

(B) New Sources Located on Previously Unused Site.

(i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall cause or permit the operation of that noise source if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels  $L_{10}$  or  $L_{50}$ , by more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule.

(ii) The ambient statistical noise level of a new industrial or commercial noise source on a previously unused industrial or commercial site shall include all noises generated or indirectly caused by or attributable to that source, including all of its related activities. Sources exempted from the requirements of section (1) of this rule, which are identified in subsection (5)(b), (5)(c), (5)(d), (5)(e), (5)(f), (5)(j), (5)(k) of this rule, shall not be excluded from this ambient measurement.

(c) Quiet Areas. No person owning or controlling an industrial or commercial noise source located either within the boundaries of a Quiet Area or outside its boundaries shall cause or permit the operation of that noise source if the statistical noise levels generated by that source exceed the levels specified in Table 9 as measured within the Quiet Area and not less than 400 feet (122 meters) from the noise source.

(d) Impulse Sound. Notwithstanding the noise rules in Tables 7 through 9, no person owning or controlling an industrial or commercial noise source shall cause or permit the operation of that noise source if an impulsive sound is emitted in air by that source which exceeds the sound pressure levels specified below, as measured at an appropriate measurement point, as specified

in subsection (3)(b) of this rule:

(A) Blasting. 98 dBC, slow response, between the hours of 7 am and 10 pm and 93 dBC, slow response, between the hours of 10 pm and 7 am.

(B) All Other Impulse Sounds. 100 db, peak response, between the hours of 7 am and 10 pm and 80 dB, peak response, between the hours of 10 pm and 7 am.

(f) Octave Bands and Audible Discrete Tones. When the Director has reasonable cause to believe that the requirements of subsections (1)(a), (1)(b), or (1)(c) of this rule do not adequately protect the health, safety or welfare of the public as provided for in ORS Chapter 467, the Department may require the noise source to meet the following rules:

(A) Octave Bands. No person owning or controlling an industrial or commercial noise source shall cause or permit the operation of that noise source if such operation generates a median octave band sound pressure level which, as measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceeds applicable levels specified in Table 10.

(B) One-third Octave Bands. No person owning or controlling an industrial or commercial noise source shall cause or permit the operation of that noise source if such operation generates a median one-third octave band sound pressure level which, as measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, and in a one-third octave band at a preferred frequency, exceeds the arithmetic average of the median sound pressure levels of the two adjacent one-third octave bands by:

(i) 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;

(ii) 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;

(iii) 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.

This rule shall not apply to audible discrete tones having a one-third octave band sound pressure level 10 dB or more below the allowable sound pressure levels specified in Table 10 for the octave band which contains such one-third octave band.

(2) Compliance. Upon written notification from the Director, the owner or controller of an industrial or commercial noise source operating in violation of the adopted rules shall submit a compliance schedule acceptable to the Department. The schedule will set forth the dates, terms, and conditions by which

the person responsible for the noise source shall comply with the adopted rules.

(3) Measurement:

(a) Sound measurement procedures shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1) or to such other procedures as are approved in writing by the Department.

(b) Unless otherwise specified the appropriate measurement point shall be that point on the noise sensitive property, described below, which is further from the noise source:

(A) 25 feet (7.6 meters) toward the noise source from the point on the noise sensitive building nearest the noise source,

(B) That point on the noise sensitive property line nearest the noise source.

(4) Monitoring and Reporting:

(a) Upon written notification from the Department, person owning or controlling an industrial or commercial noise source shall monitor and record the statistical noise levels and operating times of equipment, facilities, operations, and activities, and shall submit such data to the Department in the form and on the schedule requested by the Department. Procedures for such measurements shall conform to those procedures which are adopted by the Commission and set forth in Sound Measurement Procedures Manual (NPCS-1).

(b) Nothing in this section shall preclude the Department from conducting separate or additional noise tests and measurements. Therefore, when requested by the Department, the owner or operator of an industrial or commercial noise source shall provide the following:

(A) Access to the site,

(B) Reasonable facilities, where available, including but not limited to electric power and ladders adequate to perform the testing,

(C) Cooperation in the reasonable operation, manipulation or shutdown of various equipment or operations as needed to ascertain the source of sound and measure its emission.

(5) Exemptions. Except as otherwise provided in subsection (1)(b)(B)(ii), the rules in section (1) of this rule shall not apply to:

(a) Emergency equipment not operated on a regular or scheduled basis.

(b) Warning devices not operating continuously for more than 5 minutes.

(c) Sounds created by the tires or motor used to propel any road vehicle complying with the noise standards for road vehicles.

(d) Sounds resulting from the operation of any equipment or facility of a surface carrier engaged in interstate commerce by railroad only to the extent that such equipment or facility is regulated by preemptive federal regulations as set forth in Part 201 of Title 40 of the Code of Federal Regulations.

promulgated pursuant to section 17 of the Noise Control Act of 1972, 86 Stat. 1248, Public Law 92-576; but this exemption does not apply to any standard, control, license, regulation, or restriction necessitated by special local conditions which is approved by the Administrator of the EPA after consultation with the Secretary of Transportation pursuant to procedures set forth in section 17(c)(2) of the Act.

(e) Sounds created by bells, chimes, or carillons.

(f) Sounds not electronically amplified which are created by or generated at sporting, amusement, and entertainment events, except those sounds which are regulated under other noise standards. An event is a noteworthy happening and does not include informal, frequent or ongoing activities such as, but not limited to, those which normally occur at bowling alleys or amusement parks operating in one location for a significant period of time.

(g) Sounds that originate on construction sites.

(h) Sounds created in construction or maintenance of capital equipment.

(i) Sounds created by lawn care maintenance and snow removal equipment.

(j) Sounds generated by the operation of aircraft and subject to preemptive federal regulation. This exception does not apply to aircraft engine testing, activity conducted at the airport that is not directly related to flight operations, and any other activity not preemptively regulated by the federal government or controlled under OAR 340-35-045.

(k) Sounds created by the operation of road vehicle auxiliary equipment complying with the noise rules for such equipment as specified in OAR 340-35-030(1)(e).

(l) Sounds created by agricultural activities.

(m) Sounds created by activities related to the growing or harvesting of forest tree species on forest land as defined in subsection (1) of ORS 526.324.

(6) Exceptions: Upon written request from the owner or controller of an industrial or commercial noise source, the Department may authorize exceptions to section 340-35-035(1), pursuant to rule 340-35-010, for:

(a) Unusual and/or infrequent events.

(b) Industrial or commercial facilities previously established in areas of new development of noise sensitive property.

(c) Those industrial or commercial noise sources whose statistical noise levels at the appropriate measurement point are exceeded by any noise source external to the industrial or commercial noise source in question.

(d) Noise sensitive property owned or controlled by the person who controls or owns the noise source.

(e) Noise sensitive property located on land zoned exclusively for industrial or commercial use.

Noise Control Regulations for Motor Sports Vehicles and Facilities

340-35-040 (1) Statement of Purpose. (a) The Commission finds that the periodic noise pollution caused by Oregon motor sports activities threatens the environment of citizens residing in the vicinity of motor sports facilities. To mitigate motor sports noise impacts, a coordinated statewide program is desirable to ensure that effective noise abatement programs are developed and implemented where needed. This abatement program includes measures to limit the creation of new noise impacts and the reduction of existing noise impacts to the extent necessary and practicable.

(b) Since the Commission also recognizes the need of Oregon's citizens to participate in recreational activities of their choice, these rules balance those citizen needs which may conflict when motor sports facilities are in operation. Therefore, a policy of continuing participation in standards development through the active cooperation of interested parties is adopted. The choice of these parties is to limit the noise emission levels of racing and recreational vehicles, to designate equipment requirements, and to establish appropriate hours of operation. It is anticipated that safety factors, limited technology, special circumstances, and special events may require exceptions to these rules in some instances; therefore, a mechanism to accommodate this necessity is included in this rule.

(c) This rule is designed to encourage the motor sports facility owner, the vehicle operator, and government to cooperate to limit and diminish noise and its impacts. These ends can be accomplished by encouraging compatible land uses and controlling and reducing the racing vehicle noise impacts on communities in the vicinity of motor sports facilities to acceptable levels.

(d) This rule is enforceable by the Department and civil penalties ranging from a minimum of \$25 to a maximum of \$500 may be assessed for each violation. The motor sports facility owner, the racing vehicle owner and the racing vehicle driver are held responsible for compliance with provisions of this rule. A schedule of civil penalties for noise control may be found under OAR 340-12-052.

(2) Standards:

(a) Drag Racing Vehicle. No motor sports facility owner and no person owning or controlling a drag racing vehicle shall cause or permit its operation at any motor sports facility unless the vehicle is equipped with a properly installed and well maintained muffler.

(b) Oval Course Racing Vehicle. No motor sports facility owner and no person owning or controlling an oval course racing vehicle shall cause or permit its operation at any motor sports facility unless the vehicle is equipped with a properly installed and well maintained muffler and noise emissions from its operation do not exceed 105 dBA at trackside.

(c) Sports Car Racing Vehicle. No motor sports facility owner and no person owning or controlling a sports car racing vehicle shall cause or permit its operation at any motor sports

facility unless the vehicle is equipped with a properly installed and well maintained muffler and noise emissions from its operation do not exceed 105 dBA at trackside.

(d) Closed Course Motorcycle Racing Vehicle. No motor sports facility owner and no person owning or controlling a closed course motorcycle racing vehicle shall cause or permit its operation at any motor sports facility unless the vehicle is equipped with a properly installed and well maintained muffler and noise emissions from its operation do not exceed 105 dBA at trackside or 105 dBA at 20 inches (.5 meter) from the exhaust outlet during the stationary measurement procedure.

(e) Open Course Motorcycle Racing Vehicle. No motor sports facility owner and no person owning or controlling an open course motorcycle racing vehicle shall cause or permit its operation at any motor sports facility unless the vehicle is equipped with a properly installed and well maintained muffler and noise emissions do not exceed 105 dBA at 20 inches (.5 meter) from the exhaust outlet during the stationary measurement procedure.

(f) Four Wheel Drive Racing Vehicles. No motor sports facility owner and no person owning or controlling a four wheel drive racing vehicle shall cause or permit its operation at any motor sports facility unless the vehicle is equipped with a properly installed and well maintained muffler and noise emissions from its operation do not exceed 105 dBA at trackside.

(g) Watercraft Racing Vehicle. No motor sports facility owner and no person owning or controlling a watercraft racing vehicle shall cause or permit its operation at any motor sports facility unless the vehicle is equipped with a properly installed and well maintained muffler and noise emissions from its operation do not exceed 105 dBA at trackside.

(h) Autocross or Solo Racing Vehicle. No motor sports facility owner and no person owning or controlling an autocross or solo racing vehicle shall cause or permit its operation on any temporary autocross or solo course unless the vehicle is equipped with a properly installed and well maintained muffler and noise emissions from its operation do not exceed 90 dBA at trackside. Autocross and solo events conducted on a permanent motor sports facility, such as a sports car or go kart course, shall comply with the requirements for sports car racing vehicles specified in subsection (2)(c) of this section.

(i) Go Kart Racing Vehicle. No motor sports facility owner and no person owning or controlling a go kart racing vehicle shall cause or permit its operation at any motor sports facility unless the vehicle is equipped with a properly installed and well maintained muffler and noise emissions from its operation do not exceed 105 dBA at trackside.

(3) New Motor Sports Facilities. Prior to the construction or operation of any permanent new motor sports facility, the facility owner shall submit for Department approval the projected motor sports facility noise impact boundaries. The data and analysis used to determine the boundary shall also be submitted to

the Department for evaluation. Upon approval of the boundaries, this information shall be submitted to the appropriate local planning unit and the Department of Land Conservation and Development for their review and appropriate action.

(4) Practice Sessions. Notwithstanding section (2) of this rule, all racing vehicles in order to operate in practice sessions, shall comply with a noise mitigation plan which shall have been submitted to and approved by the motor sports advisory committee and the Director. Such plans may be developed and submitted prior to each racing season. An approved plan may be varied with prior written approval of the Department.

(5) Recreational Park. When a motor sports facility is used as a recreational park for the operation of off-road recreational vehicles, the ambient noise limits of OAR 340-35-030(1)(d) shall apply.

(6) Operations:

(a) General. No motor sports facility owner and no person owning or controlling a racing vehicle shall permit its use or operation at any time other than the following:

(A) Sunday through Thursday during the hours 8 a.m. to 10 p.m. local time; and

(B) Friday through Saturday, state and national holidays and the day preceding, not to exceed three consecutive days, during the hours 8 a.m. to 11 p.m. local time.

(b) Overruns. Each motor sports facility may overrun the specified curfew times, including the time specified in subsection (11)(c) of this rule, not to exceed 30 minutes, no more than six (6) days per year due to conditions beyond the control of the owner. Each overrun shall be documented to the Department within 10 days of the occurrence.

(c) Special Events. Any approved special motor racing event may also be authorized to exceed this curfew pursuant to subsection (12)(a) of this rule.

(d) Continued Special Events. Any approved special event that cannot be completed within established curfew times due to circumstances beyond the control of the owner, such as but not limited to oil spills and accidents, may be continued the following day under the same conditions provided in the special event exception. The Department shall be notified within 10 days of any continued special event.

(7) Measurement and Procedures. All instruments, procedures and personnel involved in performing sound level measurements shall conform to the requirements specified in Motor Race Vehicle and Facility Sound Measurement and Procedure Manual, NPCS-35, or to standard methods approved in writing by the Department.

(8) Monitoring and Reporting:

(a) It shall be the responsibility of the motor sports facility owner to measure and record the required noise level data as specified under Subsections (2) (b)-(i) of this rule and the Motor Race Vehicle and Facility Sound Measurement and Procedure Manual, NPCS-35. The owner shall either keep such recorded noise dat



available for a period of at least one calendar year or submit such data to the Department for storage. Upon request the owner shall make such recorded noise data available to the Department.

(b) When requested by the Department, any motor sports facility owner shall provide the following:

(A) Free access to the facility

(B) Free observation of noise level monitoring

(C) Cooperation and assistance in obtaining the reasonable operation of any Racing Vehicle using the facility as needed to ascertain its noise emission level.

(9) Vehicle Standards. No motor sports facility owner and no person owning or controlling a racing vehicle shall cause or permit a racing event or practice session unless the vehicle is equipped and operated in accordance with these rules.

(10) Vehicle Testing. Nothing in this section shall preclude the motor sports facility owner from testing or barring the participation of any racing vehicle for non-compliance with these rules.

(11) Exemptions:

(a) Any motor sports facility whose racing surface is located more than 2 miles from the nearest noise sensitive property shall be exempt from this rule.

(b) Any top fuel-burning drag racing vehicle shall be exempt from the requirements of subsection (2)(a) of this section. No later than January 31, 1985 the Department shall report to the Commission on progress toward muffler technology development for this vehicle class and propose any necessary recommendations to amend this exemption.

(c) Operation of non-complying jet powered dragsters between the hours of 11 am and 10 pm.

(d) Operation of non-muffled racing vehicles at practice sessions between 12:00 noon and 3:00 p.m. as part of an approved plan as required pursuant to Section (4) of this rule.

(12) Exceptions. The Department shall consider the majority and minority recommendations of the motor sports advisory committee prior to the approval or denial of any exception to these rules. Exceptions may be authorized by the Department for the following pursuant to OAR 340-35-010:

(a) Special motor racing events.

(b) Race vehicle or class of vehicles whose design or mode of operation makes operation with a muffler inherently unsafe or technically unfeasible.

(c) Motor sports facilities previously established in areas of new development of noise sensitive property.

(d) Noise sensitive property owned or controlled by a motor sports facility owner.

(e) Noise sensitive property located on land zoned exclusively for industrial or commercial use.

(f) Any motor sports facility owner or race sanctioning body that proposes a racing vehicle noise control program that accomplishes the intended results of the standards of section

(2), the measurement and procedures of section (7), the monitoring and the reporting of section (8), of this rule.

(g) Any motor sports facility demonstrating that noise sensitive properties do not fall within the motor sports facility noise impact boundaries may be exempt from the curfew limits of section (6) and the monitoring and reporting requirements of section (8) of this rule.

(h) Any practice session for non-muffled racing vehicles that does not meet the exemption requirements specified in Subsection (11) of this rule.

(13) Motor Sports Advisory Committee Actions. The committee shall serve at the call of the chairman who shall be elected by the members in accordance with the rules adopted by the committee for its official action.

(14) Effective Date. These rules shall be effective January 1, 1982.

#### Noise Control Regulations for Airports

340-35-045 (1) Statement of Purpose. (a) The Commission finds that noise pollution caused by Oregon airports threatens the public health and welfare of citizens residing in the vicinity of airports. To mitigate airport noise impacts a coordinated statewide program is desirable to ensure that effective Airport Noise Abatement Programs are developed and implemented where needed. An abatement program includes measures to prevent the creation of new noise impacts or the expansion of existing noise impacts to the extent necessary and practicable. Each abatement program will primarily focus on airport operational measures to prevent increased, and to lessen existing, noise levels. The program will also analyze the effects of airport noise emission regulations and land use controls.

(b) The principal goal of an airport proprietor who may be required to develop an Airport Noise Abatement program under this rule should be to reduce noise impacts caused by aircraft operations, and to address in an appropriate manner the conflicts which occur within the higher noise contours.

(c) The Airport Noise Criterion is established to define a perimeter for study and for noise sensitive use planning purposes. It is recognized that some or many means of addressing aircraft/airport noise at the Airport Noise Criterion Level may be beyond the control of the airport proprietor. It is therefore necessary that abatement programs be developed, whenever possible, with the cooperation of federal, state and local governments to ensure that all potential noise abatement measures are fully evaluated.

(d) This rule is designed to encourage the airport proprietor, aircraft operator, and government at all levels to cooperate to prevent and diminish noise and its impacts. These ends may be accomplished by encouraging compatible land uses and controlling and reducing the airport/aircraft noise impacts

on communities in the vicinity of airports to acceptable levels.

(2) Airport Noise Criterion. The criterion for airport noise is an Annual Average Day-Night Airport Noise Level of 55 dBA. The Airport Noise Criterion is not designed to be a standard for imposing liability or any other legal obligation except as specifically designated within this Section.

(3) Airport Noise Impact Boundary:

(a) Air Carrier Airports. Within twelve months of designation, the proprietor of any Air Carrier Airport shall submit for Department approval, the existing airport Noise Impact Boundary. The data and analysis used to determine the boundary shall also be submitted to the Department for evaluation.

(b) Existing Non-Air Carrier Airports. After an unsuccessful effort to resolve a noise problem pursuant to subsection (5), the Director may require the proprietor of any existing non-air carrier airport to submit for Department approval, all information reasonably necessary for the calculation of the existing airport Noise Impact Boundary. This information is specified in the Department's Airport Noise Control Procedure Manual (NPCS-37), as approved by the Commission. The proprietor shall submit the required information within twelve months of receipt of the Director's written notification.

(c) New Airports. Prior to the construction or operation and any required local government land-use approval of any New Airport, the proprietor shall submit for Department approval the projected airport Noise Impact Boundary for the first full calendar year of operation. The data and analysis used to determine the boundary shall also be submitted to the Department for evaluation. The Department shall notify the appropriate local planning unit of the results of their evaluation.

(d) Airport Master Planning. Any airport proprietor who obtains funding to develop an Airport Master Plan shall submit for Department approval an existing noise impact boundary and projected noise impact boundaries at five, ten, and twenty years into the future. The data and analysis used to determine the boundaries shall also be submitted to the Department for evaluation.

(e) Impact Boundary Approval. Within 60 days of the receipt of a completed airport noise impact boundary, the Department shall either consider the boundary approved or provide written notification to the airport proprietor of deficiencies in the analysis.

(4) Airport Noise Abatement Program and Methodology:

(a) Abatement Program. The proprietor of an existing or new airport whose airport Noise Impact Boundary includes Noise Sensitive Property, or may include Noise Sensitive Property, shall submit a proposed Airport Noise Abatement Program for Commission approval within 12 months of notification, in writing, by the Director. The Director shall give such notification when the Commission has reasonable cause to believe that an abatement program is necessary to protect the health, safety or welfare

of the public following a public informational hearing on the question of such necessity. Reasonable cause shall be based upon a determination that: 1) Present or planned airport operations cause or may cause noise impacts that interfere with noise sensitive use activities such as communication and sleep to the extent that the public health, safety or welfare is threatened; 2) These noise impacts will occur on property presently used for noise sensitive purposes, or where noise sensitive use is permitted by zone or comprehensive plan; and 3) It appears likely that a feasible noise abatement program may be developed.

(b) Program Elements. An Airport Noise Abatement Program shall consist of all of the following elements, but if it is determined by the Department that any element will not aid the development of the program, it may be excluded.

(A) Maps of the airport and its environs, and supplemental information, providing:

(i) Projected airport noise contours from the Noise Impact Boundary to the airport property line in 5 dBA increments under current year of operations and at periods of five, ten, and twenty years into the future with proposed operational noise control measures designated in subsection (4)(b)(B);

(ii) All existing Noise Sensitive Property within the airport Noise Impact Boundary;

(iii) Present zoning and comprehensive land use plan permitted uses and related policies;

(iv) Physical layout of the airport including the size and location of the runways, taxiways, maintenance and parking areas;

(v) Location of present and proposed future flight tracks;

(vi) Number of aircraft flight operations used in the calculation of the airport noise levels. This information shall be characterized by flight track, aircraft type, flight operation, number of daytime and nighttime operations, and takeoff weight of commercial jet transports.

(B) An airport operational plan designed to reduce airport noise impacts at Noise Sensitive Property to the Airport Noise Criterion to the greatest extent practicable. The plan shall include an evaluation of the appropriateness and effectiveness of the following noise abatement operations by estimating potential reductions in the airport Noise Impact Boundary and numbers of Noise Sensitive Properties impacted within the boundary, incorporating such options to the fullest extent practicable into any proposed Airport Noise Abatement Program:

(i) Takeoff and landing noise abatement procedures such as thrust reduction or maximum climb on takeoff;

(ii) Preferential and priority runway use systems;

(iii) Modification in approach and departure flight tracks;

(iv) Rotational runway use systems;

(v) Higher glide slope angles and glide slope intercept altitudes on approach;

(vi) Displaced runway thresholds;

(vii) Limitations on the operation of a particular type or class of aircraft, based upon aircraft noise emission characteristics;

(viii) Limitations on operations at certain hours of the day;

(ix) Limitations of the number of operations per day or year;

(x) Establishment of landing fees based on aircraft noise emission characteristics or time of day;

(xi) Rescheduling of operations by aircraft type or time of day;

(xii) Shifting operations to neighboring airports;

(xiii) Location of engine run-up areas;

(xiv) Times when engine run-up for maintenance can be done;

(xv) Acquisition of noise suppressing equipment and construction of physical barriers for the purpose of reducing aircraft noise impact;

(xvi) Development of new runways or extended runways that would shift noise away from populated areas or reduce the noise impact within the Airport Noise Impact Boundary.

(C) A proposed land use and development control plan, and evidence of good faith efforts by the proprietor to obtain its approval, to protect the area within the airport Noise Impact Boundary from encroachment by non-compatible noise sensitive uses and to resolve conflicts with existing unprotected noise sensitive uses within the boundary. The Plan is not intended to be a community-wide comprehensive plan; it should be airport-specific, and should be of a scope appropriate to the size of the airport facility and the nature of the land uses in the immediate area. Affected local governments shall have an opportunity to participate in the development of the plan, and any written comments offered by an affected local government shall be made available to the Commission. The Department shall review the comprehensive land use plan of the affected local governments to ensure that reasonable policies have been adopted recognizing the local government's responsibility to support the proprietor's efforts to protect the public from excessive airport noise. The plan may include, but not be limited to, the following actions within the specified noise impact zones:

(i) Changes in land use through non-noise sensitive zoning and revision of comprehensive plans, within the Noise Impact Boundary (55 dBA);

(ii) Influencing land use through the programming of public improvement projects within the Noise Impact Boundary (55 dBA);

(iii) Purchase assurance programs within the 65 dBA boundary;

(iv) Voluntary relocation programs within the 65 dBA boundary;

(v) Soundproofing programs within the 65 dBA boundary, or within the Noise Impact Boundary (55 dBA) if the governmental entity with land use planning responsibility desires, and will play a major role in implementation.

(vi) Purchase of land for airport use within the 65 dBA boundary;

(vii) Purchase of land for airport related uses within the 65 dBA boundary;

(viii) Purchase of land for non-noise sensitive public use within the Noise Impact Boundary (55 dBA);

(ix) Purchase of land for resale for airport noise compatible purposes within the 65 dBA boundary;

(x) Noise impact disclosure to purchaser within the Noise Impact Boundary (55 dBA);

(xi) Modifications to Uniform State Building Code for areas of airport noise impact within the Noise Impact Boundary (55 dBA).

(c) Federal Aviation Administration Concurrence. The proprietor shall use good faith efforts to obtain concurrence or approval for any portions of the proposed Airport Noise Abatement Program for which the airport proprietor believes that Federal Aviation Administration concurrence or approval is required. Documentation of each such effort and a written statement from FAA containing its response shall be made available to the Commission.

(d) Commission Approval. Not later than twelve months after notification by the Director pursuant to subsection (4)(a), the proprietor shall submit a proposed Airport Noise Abatement Program to the Commission for approval. Upon approval, the abatement program shall have the force and effect of an order of the Commission. The Commission may direct the Department to undertake such monitoring or compliance assurance work as the Commission deems necessary to ensure compliance with the terms of its order. The Commission shall base its approval or disapproval of a proposed Noise Abatement Program upon:

(A) The completeness of the information provided;

(B) The comprehensiveness and reasonableness of the proprietor's evaluation of the operational plan elements listed under subsection (4)(b)(B);

(C) The presence of an implementation scheme for the operational plan elements, to the extent feasible;

(D) The comprehensiveness and reasonableness of the proprietor's evaluation of land use and development plan elements listed under subsection (4)(b)(C);

(E) Evidence of good faith efforts to adopt the land use and development plan, or obtain its adoption by the responsible governmental body, to the extent feasible;

(F) The nature and magnitude of existing and potential noise impacts;

(G) Testimony of interested and affected persons; and

(H) Any other relevant factors.

(e) Program Renewal. No later than six (6) months prior to the end of a five year period following the Commission's approval, each current airport Noise Abatement Program shall be reviewed and revised by the proprietor, as necessary, and

submitted to the Commission for consideration for renewal.

(f) Program Revisions. If the Director determines that circumstances warrant a program revision prior to the scheduled five (5) year review, the Airport Proprietor shall submit to the Commission a revised program within twelve (12) months of written notification by the Director. The Director shall make such determination based upon an expansion of airport capacity, increase in use, change in the types or mix of various aircraft utilizing the airport, or changes in land use and development in the impact areas that were unforeseen in earlier abatement plans. Any program revision is subject to all requirements of this rule.

(5) Consultation. The Director shall consult with the airport proprietor, members of the public, the Oregon Departments of Transportation, Land Conservation and Development and any affected local government in an effort to resolve informally a noise problem prior to issuing a notification under subsection (3)(b), (4)(a), and (4)(f) of this section.

(6) Noise Sensitive Use Deviations. The airport noise criterion is designed to provide adequate protection of noise sensitive uses based on out-of-doors airport noise levels. Certain noise sensitive use classes may be acceptable within the airport Noise Impact Boundary if all measures necessary to protect interior activities are taken.

(7) Airport Noise Monitoring. The Department may request certification of the airport noise impact boundary by actual noise monitoring, where it is deemed necessary to approve the boundary pursuant to subsection (3)(e).

(8) Exceptions. Upon written request from the Airport Proprietor, the Department may authorize exceptions to this section, pursuant to rule 340-35-010, for:

(a) Unusual or infrequent events;

(b) Noise sensitive property owned or controlled by the airport;

(c) Noise sensitive property located on land zoned exclusively for industrial or commercial use.

#### Variances

340-35-100 (1) Conditions for Granting. The Commission may grant specific variances from the particular requirements of any rule, regulation, or order to such specific persons or class of persons or such specific noise source upon such conditions as it may deem necessary to protect the public health and welfare, if it finds that strict compliance with such rule, regulation, or order is inappropriate because of conditions beyond the control of the persons granted such variance or because of special circumstances which would render strict compliance unreasonable or impractical due to special physical conditions or cause, or because strict compliance would result in substantial curtailment or closing down of a business, plant, or operation, or because no other alternative facility or method

of handling is yet available. Such variances may be limited in time.

(2) Procedure for Requesting. Any person requesting a variance shall make his request in writing to the Department for consideration by the Commission and shall state in a concise manner the facts to show cause why such variance should be granted.

(3) Revocation or Modification. A variance granted may be revoked or modified by the Commission after a public hearing held upon not less than 20 days notice. Such notice shall be served upon the holder of the variance by certified mail and all persons who have filed with the Commission a written request for such notification.



TABLE 1

(340-035-025)

New Motor Vehicle Standards

Moving Test at 50 Feet (15.2 Meters)

<u>Vehicle Type</u>	<u>Effective For</u>	<u>Maximum Noise Level, dBA</u>
Motorcycles	1975 Model	86
	1976 Model	83
	1977-1982 Models	81
	1983-1985 Street Models	
	built after December 31, 1982	83
	Street Models after 1985	80
	Moped Models built after	
	December 31, 1982	70
	Off-Road Models with engine	
	displacements of 170 cc and	
	lower:	
	1983-1985 Models built	
	after December 31, 1982	83
	Models after 1985	80
	Off-Road Models with engine	
	displacement greater than	
	170 cc:	
	1983-1985 Models built	
	after December 31, 1982	86
	Models after 1985	82
Snowmobiles as defined in ORS 481.048	1975 Model	82
	Models after 1975	78
Trucks and school buses in excess of 10,000 pounds (4536 kg) GVWR	1975 Model	86
	1976-1981 Models or Models	
	manufactured after	
	January 1, 1978 and before	
	January 1, 1986	83
	Models manufactured after	
	January 1, 1986 and before	
	(Reserved)	80
	Models manufactured after	
	(Reserved)	(Reserved)
Automobiles, Light Trucks, and All Other Road Vehicles	1975 Model	83
	Models after 1975	80
Buses except school buses, as defined under ORS 481.030	1975 Model	86
	1976-1978 Models	83
	Models after 1978	80
Motorboats	Models offered for sale after June 30, 1980	82

TABLE 2

(340-35-030)

In-Use Road Vehicle Standards

## Stationary Test

<u>Vehicle Type</u>	<u>Model Year</u>	<u>Maximum Noise Level, dBA</u>	<u>Minimum Distance from Vehicle to Measurement Point</u>
All vehicles described in ORS 481.205(2)(a)	Before 1976	94	25 feet (7.6 met
	1976 and After	91	25 feet (7.6 met
All other trucks in excess of 8,000 pounds (3629 kg) GVWR	Before 1976	94	25 feet (7.6 met
	1976-1981	91	25 feet (7.6 met
	After 1981	88	25 feet (7.6 met
Motorcycles	1975 and Before	102	20 inches (1/2 m
	After 1975	99	20 inches (1/2 m
Front-engine automobiles, light trucks and all other front-engine road vehicles	All	95	20 inches (1/2 m
Rear-engine automobiles and light trucks and mid-engine automobiles and light trucks	All	97	20 inches (1/2 m
Buses as defined under ORS 481.030	Before 1976	94	25 feet (7.6 me
	1976 and After	91	25 feet (7.6 me

TABLE 3

(340-35-030)

In-Use Road Vehicle Standards

Moving Test at 50 Feet (15.2 meters) or Greater

<u>Operating Conditions</u>	<u>Trucks and Buses exceeding 10,000 pounds GVWR</u>	<u>Automobiles and light trucks</u>	<u>Motorcycles</u>
Posted 45 mph or less under any grade, load, acceleration or deceleration.	86	72	78
Posted greater than 45 mph under any grade, load, acceleration or deceleration.	90	78	82
Moving at 35 mph or less on level roadway under constant speed more than 200 feet from stop.	84	70	74

TABLE 4

(340-35-030)

## Off-Road Recreational Vehicle Standards

## Allowable Noise Limits

<u>Vehicle Type</u>	<u>Model Year</u>	<u>Maximum Noise Level (dBA) and Distance from Vehicle to Measurement Point</u>	
		<u>Stationary Test</u> 20 Inches (1/2 Meter)	<u>Moving Test</u> at 50 Feet (15.2 Meters)
Motorcycles	1975 and Before	102	85
	After 1975	99	82
Snowmobiles	1971 and Before		86
	1972-1975		84
	After 1975		80
Boats			
	Underwater exhaust		84
	Atmosphere exhaust	100	84
All Others			
	Front engine	95	78
	Mid and rear engines	97	78

TABLE 5

(340-35-030)

Ambient Standards for Vehicles Operated  
Near Noise Sensitive Property

## Allowable Noise Limits

<u>Time</u>	<u>Maximum Noise Level, dBA</u>
7 a.m. - 10 p.m.	60
10 p.m. - 7 a.m.	55

TABLE 6

(340-35-030)

Motor Vehicle Auxiliary Equipment Noise Standards

Stationary Test at 50 Feet (15.2 Meters) or Greater

<u>Model Year</u>	<u>Maximum Noise Level, dBA</u>
Before 1976	88
1976 - 1978	85
After 1978	82

TABLE 7

(340-35-035)

Existing Industrial and Commercial Noise Source Standards

Allowable Statistical Noise Levels in Any One Hour

<u>7 a.m.-10 p.m.</u>	<u>10 p.m.-7 a.m.</u>
L <sub>50</sub> - 55 dBA	L <sub>50</sub> - 50 dBA
L <sub>10</sub> - 60 dBA	L <sub>10</sub> - 55 dBA
L <sub>1</sub> - 75 dBA	L <sub>1</sub> - 60 dBA

TABLE 8  
(340-35-035)

New Industrial and Commercial Noise Source Standards

Allowable Statistical Noise Levels in Any One Hour

<u>7 a.m. - 10 p.m.</u>	<u>10 p.m. - 7 a.m.</u>
L <sub>50</sub> - 55 dBA	L <sub>50</sub> - 50 dBA
L <sub>10</sub> - 60 dBA	L <sub>10</sub> - 55 dBA
L <sub>1</sub> - 75 dBA	L <sub>1</sub> - 60 dBA

TABLE 9  
(340-35-035)

Industrial and Commercial Noise Source Standards for Quiet Areas

Allowable Statistical Noise Levels in Any One Hour

<u>7 a.m. - 10 p.m.</u>	<u>10 p.m. - 7 a.m.</u>
L <sub>50</sub> - 50 dBA	L <sub>50</sub> - 45 dBA
L <sub>10</sub> - 55 dBA	L <sub>10</sub> - 50 dBA
L <sub>1</sub> - 60 dBA	L <sub>1</sub> - 55 dBA

TABLE 10

(340-35-035)

Median Octave Band Standards for  
Industrial and Commercial Noise Sources

Allowable Octave Band Sound Pressure Levels

<u>Octave Band Center</u> <u>Frequency, Hz</u>	<u>7 a.m. - 10 p.m.</u>	<u>10 p.m. - 7 a.m.</u>
31.5	68	65
63	65	62
125	61	56
250	55	50
500	52	46
1000	49	43
2000	46	40
4000	43	37
8000	40	34





WASHINGTON, D.C., NOISE REGULATIONS



3000 GENERAL PROVISIONS

- 3000.1 The purpose of D.C. Law 2-53 (which is codified in chapters 30 and 31 of this title) is to provide comprehensive regulations to control noise levels in the District of Columbia so as to preserve, protect, and promote the public health, safety, and welfare, and the peace and comfort of the inhabitants of the city; and to prevent injury to humans, animals, and property.
- 3000.2 It is the intent of the Council of the District of Columbia that D.C. Law 2-53 (the "Act") be liberally construed to carry out its general purpose.
- 3000.3 The Mayor shall designate an agency to administer the noise control program established by the Act.
- 3000.4 The agency that administers the noise control program shall conduct programs of public education regarding the following:
- (a) The causes, effects, and general methods of abatement and control of noise and vibration;
  - (b) The actions prohibited by the Act; and
  - (c) The procedures for reporting violations.
- 3000.5 The agency that administers the noise control program shall encourage the participation of public interest groups in related public information efforts.
- 3000.6 The agency that administers the noise control program shall request any other department or agency responsible for any proposed or final standard, regulation, or similar action to consult with it on the advisability of revising the action, if there is reason to believe that the action is not consistent with chapters 30 and 31 of this title.
- 3000.7 The agency that administers the noise control program shall establish and publish on or before November 15, 1978, the test procedures to be used for measuring sound levels to determine compliance with chapters 30 and 31 of this title.

*Is this done, if so where?*

3000 GENERAL PROVISIONS (Continued)

- 3000.8 The test procedures for measuring sound levels, as required by §3000.7, shall be revised periodically, as necessary.
- 3000.9 The public shall be given thirty (30) days to comment on all proposed test procedures before they are made final.
- 3000.10 On or before May 15, 1979, the agency that administers the noise control program shall establish noise assessment guidelines for the evaluation of proposed projects for the capital improvements budget and program.
- 3000.11 The guidelines required by §3000.10 may be used in the determination of the relative priority of each project in terms of noise impact.
- 3000.12 The agency that administers the noise control program shall evaluate and report to the D.C. Council every year on the effectiveness of the noise control program, and shall make recommendations for any legislative or budgetary changes necessary to improve the program.
- 3000.13 Noise of safety signals, emergency pressure relief valves, and warning or alarm devices shall be exempt (including horns when necessary as a danger warning): Provided, that no person shall knowingly permit the noise to be made or to continue beyond that necessary for the emergency safety purpose, or necessary testing.
- 3000.14 Notwithstanding any specific noise limitation established by chapters 31 and 32 of this title, upon a determination by the Mayor that a given sound constitutes a noise disturbance, that sound shall be considered a violation of the Act.
- 3000.15 The Mayor shall consult with the Administrator of the Federal Aviation Administration to recommend changes in airport operations to minimize noise disturbances resulting from the landing and the takeoff of planes at the Washington National Airport.
- 3000.16 The Mayor shall require all departments responsible for a capital improvements budget and program to prepare an analysis of the noise impact of any proposed capital projects in accordance with noise assessment guidelines established by the administering agency pursuant to §§3000.3 through 3000.12 of this chapter.
- 3000.17 For the purposes of this section, the term "proposed capital projects" includes land acquisition, building construction, highway improvements, and fixed equipment installation.
- 3000.18 All contracts signed by the District for capital projects shall contain provisions requiring compliance with the Act.
- 3000.19 The Mayor shall ensure that any written contract, agreement, purchase order, or other instrument by which the District is committed to the expenditure of monies in return for goods or services shall contain provisions requiring compliance with the Act.

3000.20 Nothing in this act shall be construed as repealing or limiting the effectiveness of noise limiting provisions contained in the D.C. Harbor Regulations (DCMR Title 19).

3000.21 Each separate provision of chapters 31 and 32 of this title shall be deemed independent of any other provision of those chapters and, if ~~all~~ or part of any provision, sentence, clause, or section is held illegal, invalid, unconstitutional, or inapplicable to any person or circumstance, the illegality, invalidity, unconstitutionality, or inapplicability shall not affect or impair any of the remaining provisions, sentences, clauses, sections, or parts of those chapters or their application to other parts or circumstances.

3000.22 It is the legislative intent that the Act would have been enacted if an illegal, invalid, or unconstitutional provision, sentence, clause, section, or part had not been included in the Act, and if the person or circumstances to which all or part of the Act is inapplicable had been specifically exempted from the Act.

*\$ 500.00*  
**3001 MAXIMUM SOUND LEVELS**

**3001.1** No person shall cause, suffer, or permit any sound that emanates from an operation, activity, or noise source under his or her control to exceed the maximum permissible sound level established in the following table as applicable for the time of day or night and the zoning location where the noise originates.

ZONE	MAXIMUM NOISE LEVEL	
	Daytime <i>7:00 A.M. TO 9:00 P.M.</i>	Nighttime <i>9:00 P.M. TO 7:00 A.M.</i>
Residential, special purpose, or waterfront zone	60 db(A)	55 db(A)
Commercial or light-manufacturing zone	65 db(A)	60 db(A)
Industrial zone	70 db(A)	65 db(A)

*See Section 3102.19.2 FOR TIMES.*

**3001.2** For the purposes of this section, the sound level shall be measured at the property line of the property on which the noise source is located, or as close as is practicable if there is an obstruction.

**3001.3** Sound levels shall be measured according to the test procedures prescribed by the administering agency established under §3000.3 of chapter 30 of this title.

**3001 MAXIMUM SOUND LEVELS (Continued)**

- 3001.4 If a sound can be measured in a contiguous noise zone that has a more restrictive noise limitation than that from which the noise emanates, the sound level measurement at the zone line shall not exceed that established for the more restrictive zone.
- 3001.5 If the sound emanates from a source within an area for which the maximum permissible sound level has not been established, the maximum level shall be sixty (60) dB(A).
- 3001.6 Unless restricted by another section of chapters 30 and 31 of this title, sounds emanating from a street or highway shall not exceed the most restrictive sound level established for the property bordering the street or highway.
- 3001.7 Noise emanating from inside a motor vehicle shall be measured at a distance of not less than fifty feet (50') from the vehicle.

**3002 EXEMPTIONS: PRE-EXISTING SOURCES**

- 3002.1 Sounds emanating from pre-existing sources shall, to the extent indicated, be exempt from the specific noise limitations contained in §3001 of this chapter; Provided, that the exemption shall not preclude enforcement under any other section of chapters 30 and 31 of this title.
- 3002.2 Pre-existing sources shall be exempt for one hundred and twenty (120) days after May 15, 1978.
- 3002.3 Any owner or person in control of a pre-existing source that exceeds the maximum permissible sound levels as prescribed in §3001 of this chapter shall, within one hundred and twenty (120) days after May 15, 1978, file with the Mayor a written plan for the Mayor's approval of the reduction of those sound levels to the maximum permissible levels.
- 3002.4 Each plan submitted pursuant to §3002.3 shall include a time schedule for the accomplishment of the reduction of noise levels, and shall provide for periodic increments of progress. The Mayor shall treat the plan as a request for a variance as provided in §3006 of this chapter.

**3003 EXEMPTIONS: VEHICLES USING ONLY RAILS AND TRACKS**

- 3003.1 Sounds emanating from vehicles using only rails and tracks shall, to the extent indicated, be exempt from the specific noise limitations contained in §3001 of this chapter; Provided, that the exemption shall not preclude enforcement under any other section of chapters 30 and 31 of this title.

3003.2 Vehicles propelled only upon rails and tracks shall be exempt at all times.

7/02/00 3003.3 Railroad cars operated by the Washington Metropolitan Area Transit Authority shall be operated in a manner so as not to emit maximum noise levels in excess of those established in the following table when measured at a distance of one hundred feet (100') from the center line of the track, or at the nearest property line, whichever is the greater distance from the center line of track.

ZONE	MAXIMUM NOISE LEVEL
Residential, special purpose, or waterfront zone	75 dB(A)
Commercial or light manufacturing zone	80 dB(A)
Industrial zone	90 dB(A)

3003.4 In taking a measurement pursuant to §3003.3, the slow meter response of the sound level meter shall be used, and the measurement shall be taken approximately five feet (5') above grade.

#### 3004 EXEMPTIONS: MISCELLANEOUS

3004.1 Sounds emanating from the sources covered in this section shall, to the extent indicated, be exempt from the specific noise limitations contained in §3001 of this chapter; Provided, that no exemption shall preclude enforcement under any other section of chapters 30 and 31 of this title.

3004.2 Individual pieces of construction equipment shall be exempt at all times. They shall be operated so as to comply with the noise limits established in §3102 of this title.

80 dBA 75 TO 90

3004.3 Noise of safety signals, emergency pressure relief valves, and warning or alarm devices shall be exempt (including horns when necessary as a danger warning); Provided, that no person knowingly shall permit a noise to be made or to continue beyond that necessary for the emergency safety purpose, or necessary testing.

3004.4 Noise resulting from any authorized emergency vehicle, when responding to an emergency call or acting in a time of emergency, shall be exempt; Provided, that this subsection shall not be construed to permit law enforcement, ambulance, fire, or other emergency or official personnel to make excessive noise in the performance of their duties when the noise clearly is unnecessary.

**3004 EXEMPTIONS: MISCELLANEOUS (Continued)**

- 3004.5 Noise resulting from emergency work shall be exempt at all times.
- 3004.6 The use or operation of portable power tools, home snow removal equipment, power garden devices, and other powered equipment for minor repairs or minor improvements of real or personal residential property shall be exempt on weekdays (excluding Saturdays) during daytime and from 9:00 a.m. to 9:00 p.m. on Saturdays, Sundays, and legal holidays.
- 3004.7 Motor vehicles and motorcycles shall be exempt at all times. They shall be properly maintained and operated so as to comply with the noise limits established in chapter 31 of this title.
- 3004.8 The unamplified voice shall be exempt at all times.
- 3004.9 Noise resulting from the use of bull-horn amplifiers, permanently installed public address systems, whistles, or other devices, by personnel of the District government, the U.S. government, or other public agencies acting in their official capacities shall be exempt.
- 3004.10 Church bells or music connected with worship or official church ceremonies shall be exempt.
- 3004.11 Noise emanating from solid waste compactors shall be exempt at all times until standards are developed and promulgated by the administering agency pursuant to §3004.13. *where is this*
- 3004.12 After giving a thirty (30) day notice, and within six (6) months after federal regulations for solid waste compactors are made final, the administering agency shall develop and promulgate standards for solid waste compactors. In developing the standards, the agency shall use the federal regulations for solid waste compactors as a guideline.

**3005 VARIANCES AND TEMPORARY EXEMPTIONS**

- 3005.1 Upon the application by a person responsible for any noise source, the Mayor may grant a variance or a temporary exemption from the maximum permissible noise levels or time limitations established in chapters 30 and 31 of this title when the Mayor determines the following:
- (a) That compliance with these provisions would impose an arbitrary, unreasonable, or undue hardship or inconvenience; or
  - (b) That the social value clearly outweighs the need for the limitations contained in chapters 30 and 31 of this title.



**3005 VARIANCES AND TEMPORARY EXEMPTIONS (Continued)**

- 3005.2 In determining whether to grant a variance or temporary exemption, the Mayor may consider the following:
- (a) The location;
  - (b) The time of day when the noise will occur;
  - (c) The duration of the noise;
  - (d) The magnitude of the noise relative to the feasibility of bringing the noise into conformity with chapters 30 and 31 of this title;
  - (e) Economic factors related to age and useful life of the equipment;
  - (f) The number of people affected by the variance or temporary exemption; and
  - (g) Such other matters as can be reasonably related to the impact of noise on the health, safety, welfare, peace, and quiet of the community, and the degree of hardship involved if the variance or temporary exemption is not granted.
- 3005.3 The Mayor shall grant a variance or temporary exemption only to the extent necessary to ameliorate the arbitrary, unreasonable, or undue hardship or inconvenience with due regard for the adequate protection of the public health, safety, and welfare and the intent and purpose of chapters 30 and 31 of this title.
- 3005.4 Nothing in this section shall be construed to permit any operation in violation of the Act during the pendency of a request for a variance.
- 3005.5 Nothing in this section and no variance or temporary exemption shall be construed to prevent or limit the application of the emergency procedures established under §3011 of this chapter.

**3006 VARIANCE PROCEDURES**

- 3006.1 Any person seeking a variance shall do so by filing with the Mayor a petition for a variance which shall be accompanied by plans, specifications, and other pertinent data as the Mayor may require, sufficient in scope to allow determination of the noise pollution impact that may result from granting the variance and the hardship involved if it is not granted.
- 3006.2 If the applicant is required to obtain a building permit (or some other type of permit) from the District government, he or she may include the request for a variance with the application for that permit.

3006 VARIANCE PROCEDURES (Continued)

- 3006.3 The Mayor may, at any time after an applicant files an original application, and before its expiration, require further statements in order to determine the disposition of the petition.
- 3006.4 Within three (3) months of May 15, 1978, the Mayor shall make available a list of the information to be required under this section.
- 3006.5 Notice of the variance application shall be given at least thirty (30) days before the Mayor rules on the request, unless a lesser time is justified for good cause.
- 3006.6 Notice of the variance application shall be given as follows:
- (a) The Mayor shall publish the notice in the D.C. Register;
  - (b) The applicant shall mail the notice to the owners of all property abutting the property involved in the application; and
  - (c) The applicant shall mail the notice to the occupants of property situated within two hundred feet (200') of the property involved in the application.
- 3006.7 The notice of the variance application shall show the nature of the variance requested and the location for filing an appeal.
- 3006.8 Within five (5) days after the notice appears in the D.C. Register, the applicant shall file with the Mayor a sworn affidavit demonstrating compliance with this section.
- 3006.9 Any person may submit comments on the application for a variance within twenty-five (25) days of the published notice, or within the time specified in the notice.
- 3006.10 The Mayor shall adopt and publish in the D.C. Register any additional procedures with regard to requests for variances.
- 3006.11 The Mayor may in his or her discretion hold a hearing; Provided, that a hearing shall be held if any person who may be adversely affected by the grant or denial of a variance, including the applicant, files a written request for a hearing within ten (10) days of the notice appearing in the D.C. Register.
- 3006.12 The hearing held pursuant to §3006.11 shall be held in accordance with the contested case provisions of the D.C. Administrative Procedure Act, approved October 21, 1968 (82 Stat. 1208; D.C. Code, §1-1509).
- 3006.13 In granting or denying a variance, the Mayor shall file a written opinion stating the facts and reasons for the final decision.

**3006 VARIANCE PROCEDURES (Continued)**

- 3006.14 The Mayor may condition the variance and the terms of the variance on factors that he or she deems appropriate, including a schedule of compliance specifying a definite time period within which full compliance with chapters 30 and 31 of this title and the rules and regulations adopted under the Act shall be achieved.
- 3006.15 In issuing a variance for construction work, the Mayor may prescribe the conditions, working times, types of construction equipment to be used, and permissible noise emissions as the Mayor deems to be required in the public interest.
- 3006.16 No variance issued pursuant to this section shall be adopted for a period to exceed one (1) year; Provided, that a renewal may be obtained for additional periods not to exceed two (2) years if the Mayor finds that the variance is justifiable and that the intent and purpose of the Act is not impaired.
- 3006.17 No renewal shall be granted except pursuant to the filing of an application.
- 3006.18 An application for the renewal of a variance shall be made at least sixty (60) days prior to the expiration of the variance.
- 3006.19 Notice and hearing requirements for the renewal of variances shall be the same as those applying to initial requests for variances.

**3007 TEMPORARY EXEMPTION PROCEDURES**

- 3007.1 A person may apply to the Mayor for a temporary exemption from the maximum permissible noise levels or the time limits established by chapters 30 and 31 of this title.
- 3007.2 If the applicant is required to obtain a building permit or some other type of permit from the District government, he or she may include the request for a temporary exemption with the application for that permit.
- 3007.3 The Mayor may grant the application for a temporary exemption if the Mayor deems it to be in the public interest.
- 3007.4 The approval of the temporary exemption shall be both in writing and signed by the Mayor, and shall state the following information:
- (a) The name of the party to whom the exemption is granted;
  - (b) The noise level to be permitted;
  - (c) The period of time during which the exemption shall be effective; and
  - (d) Any other conditions or qualifications deemed necessary for the protection of the public.

**3007      TEMPORARY EXEMPTION PROCEDURES      (Continued)**

- 3007.5 A temporary exemption shall be granted for as long as is necessary, but shall not exceed five (5) days.
- 3007.6 Two (2) extensions to a temporary exemption may be granted when necessary.
- 3007.7 Notice of the Mayor's approval of a temporary exemption shall be published in the D.C. Register and shall be posted in a conspicuous spot at the location involved for a period of four (4) consecutive days next following the date of the application.
- 3007.8 Any person adversely affected by the Mayor's decision may, within ten (10) days of the decision, request a hearing on the matter.
- 3007.9 If the Mayor finds that a sufficient bona fide controversy exists regarding an application, the Mayor may, in his or her discretion, hold a hearing on the matter.
- 3007.10 The hearing held pursuant to §3007.9 shall be held as soon as practical.
- 3007.11 A decision on a temporary exemption by the Mayor shall be final, subject to a de novo review by a court of competent jurisdiction.

**§§3008 - 3009: RESERVED**

**3010      NOTICE OF VIOLATIONS**

- 3010.1 Whenever the Mayor has reason to believe that a violation of any provision of the Act has occurred, he or she may, in lieu of or in addition to any other enforcement procedure, give notice of the alleged violation to the person or persons responsible, and order the persons to take corrective measures as are deemed necessary.
- 3010.2 The notice of an alleged violation shall meet the following requirements:
- (a) It shall be in writing;
  - (b) It shall indicate the section or subsections of chapters 30 and 31 of this title that have been violated; and
  - (c) It shall state the nature of the violation (including, if applicable, any dB(A) readings, the date, and the approximate time and place of their recording).

**3010 NOTICE OF VIOLATIONS (Continued)**

**3010.3** The notice of an alleged violation may allow reasonable time for the performance of any act required by the notice.

**3010.4** The notice of an alleged violation shall be deemed properly served upon the alleged violator when it is served by one (1) of the following methods:

- (a) A copy of the notice is served personally upon the alleged violator, or is left either at the alleged violator's usual place of business or at his or her usual residence with a person over the age of sixteen (16) years who is employed or who resides at that place;
- (b) A copy of the notice is left with any agent of the person to be notified, or is left at the office of the agent or with any person employed at the office, if the alleged violator's residence or place of business cannot be found in the District by reasonable search;
- (c) A copy is mailed postage prepaid to the last known address of the person to be notified and is not returned by the Postal Service authorities; or
- (d) The notice is published on three (3) consecutive days in a daily newspaper published in the District, when one (1) of the following circumstances exists:
  - (1) No address of the person to be served is known or can, with reasonable diligence, be ascertained; or
  - (2) Any notice mailed in accordance with §3010.4(c) is returned undelivered by the Postal Service authorities.

**3010.5** A notice issued pursuant to §3010 of this title shall be final unless the person adversely affected requests a hearing within the period specified in the notice of violation, or within fifteen (15) days after the date of service of the notice, whichever is less.

**3010.6** Upon receipt of a request for a hearing, the Mayor shall provide the petitioner with an opportunity for a hearing in accordance with the contested case provisions of the D.C. Administrative Procedure Act, approved October 21, 1968 (82 Stat. 1208; D.C. Code, §1-1509).

**3010.7** A decision sustaining, modifying, or vacating a notice shall be final.

**3010.8** If any person fails to comply with a final notice issued pursuant to this section, the Mayor shall institute action as may be necessary to terminate the violation.

**3010 NOTICE OF VIOLATIONS (Continued)**

- 3010.9 Any person's failure to comply with a final notice issued pursuant to this section shall constitute a separate violation of the Act.
- 3010.10 Nothing in this section shall be construed to preclude enforcement of the provisions of the Act by recovery of a penalty pursuant to §3013 of this chapter, injunctive relief, or other appropriate remedy.

**3011 EMERGENCY PROCEDURES**

- 3011.1 Notwithstanding any other provision of the Act, if the Mayor finds that any person is acting in a manner that causes or contributes to a sound level of a characteristic and duration which is likely to be injurious to the public welfare, the health of human or animal life, or to property, or which interferes with the reasonable enjoyment of life or property, the Mayor may order the person immediately to reduce or discontinue the act.
- 3011.2 Failure to comply with the Mayor's order to reduce or discontinue an action, as required in §3011.1, shall be a violation of the Act.
- 3011.3 Any person aggrieved by an emergency order of the Mayor may, within forty-eight (48) hours of the order, request a hearing by the Mayor.
- 3011.4 Upon receiving a request for a hearing from any person aggrieved by an emergency order, the Mayor shall hold the hearing as soon as is reasonably practical.
- 3011.5 The hearing regarding an emergency order shall be conducted in accordance with the contested case provisions of the D.C. Administrative Procedure Act (D.C. Code, §1-1509).
- 3011.6 A request for a hearing on an emergency order shall not be grounds for noncompliance with any order issued pursuant to this section.
- 3011.7 After the conclusion of the hearing held pursuant to §§3011.4 and 3011.5, the person shall be notified by the Mayor of the Mayor's decision. This action shall be final; Provided, that an appeal from the action shall not be grounds for noncompliance with any order issued pursuant to this section.
- 3011.8 Nothing contained in this section shall preclude the Mayor from initiating appropriate action for the recovery of a penalty as is provided in chapters 30 and 31 of this title, nor shall it preclude the Mayor from seeking any other relief or remedy as is provided by law.

## **3012 INTERFERENCE WITH MEASUREMENT**

- 3012.1 It shall be unlawful for any person to refuse, prevent, or interfere with any lawful physical determination or measurement authorized by the Act; Provided, that the provisions of §3012.2 are complied with.
- 3012.2 No District government officer or employee shall enter any privately owned premise for the purpose of making a lawful, physical determination or measurement authorized by the Act without permission of the resident or a person in the premise, or without a valid search warrant.

## **3013 PENALTIES**

- 3013.1 Any person who violates any provision of chapters 30 or 31 shall be punished by a fine not to exceed three hundred dollars (\$300) or imprisonment not to exceed ten (10) days, or both.
- 3013.2 In the event of any violation of or failure to comply with all or any section of chapters 30 and 31 of this title, each and every day of the violation or failure shall constitute a separate offense.
- 3013.3 The penalties described in this section shall be applicable to each separate offense.

## **3014 CIVIL ENFORCEMENT**

- 3014.1 Any person may commence a civil action in a court of competent jurisdiction on his or her own behalf for injunctive relief, to enforce a requirement, or to order the Mayor to perform a non-discretionary act against any person (including the District government to the extent permitted by the Eleventh Amendment of the U.S. Constitution) who is alleged to be:
- (a) In violation of any requirement of the Act;
  - (b) In violation of any order issued by the Mayor with respect to any requirement of the Act; or
  - (c) Engaged in any act prohibited by the Act.
- 3014.2 No action shall be taken under the provisions of this section prior to sixty (60) days after the plaintiff has given notice of the violation to the Mayor, and to any alleged violator of the requirements.
- 3014.3 No action shall be taken under the provisions of this section if the Mayor has begun and is diligently prosecuting a civil or criminal action in a court of competent jurisdiction in the District to require compliance with the Act or to have the appropriate penalty assessed.

## **3099 DEFINITIONS**

**3099.1** As used in chapters 30 through 32 of this title, the following words or abbreviations shall have the meaning ascribed unless the context indicates a different meaning. Where technical words are not defined, or where questions of interpretation arise regarding acoustical terminology, the American National Standard Institute (ANSI) definitions shall be used as a guide.

**ANSI** - the American National Standard Institute or its successor bodies.

**Construction** - any site preparation, excavation, assembly, erection, substantial repair, alteration, or similar action (excluding demolition) of public or private rights-of-way, structures, utilities, or similar property.

**Daytime** - the hours from 7:00 a.m. to 9:00 p.m.

**dB(A)** - (A-weighted sound level) - a measure of sound pressure level, in decibels, obtained from a sound-level meter using the A-weighting network or filter as specified in ANSI S1.4-1971 or the latest approved revision of that standard.

**Decibel** - (1/10 of a bel) - a unit (abbreviated "dB") for measuring the magnitude of sound equal to twenty (20) times the logarithm, to the base ten (10), of the ratio of the sound pressure being measured to a reference sound pressure of twenty (20) micropascals.

**Emergency work** - the work necessary to restore property to a safe condition following a public calamity or "act of God," or the work required to protect the health and safety of persons.

**Leg- (Equivalent A-Weighted Sound Level)** - the constant sound level that, in a given time period, would convey the same sound energy as the actual, time varying, A-weighted sound. The number in parenthesis immediately following the term "Leg" shall denote the time period in hours.

**Maximum sound level** - the highest level observed on a sound level meter.

**Mayor** - the Mayor of the District of Columbia or his or her designated agent.

**Motorcycle** - any motor vehicle other than a motorized bicycle having either a tandem arrangement of two (2) wheels or a tricycle arrangement of three (3) wheels, and having a seat or saddle for the use of the operator.

**Motor vehicle** - any vehicle propelled either by an internal combustion engine or by electricity or steam. This term does not include motor boats and traction engines used exclusively for drawing vehicles in fields, road rollers, and vehicles propelled only upon rails and tracks.



**Motorized bicycle** - any motor vehicle having the following:

- (a) Either a tandem arrangement of two (2) wheels equipped with tires that are sixteen inches (16") or more in diameter, or having a tricycle arrangement of three (3) wheels equipped with tires that are sixteen inches (16") or more in diameter, weighing not more than one hundred and twenty (120) pounds;
- (b) An automatic transmission; and
- (c) A motor or engine that produces not more than one and five-tenths (1.5) brake horsepower (as rated by the Society of Automatic Engineers), with a piston displacement of not more than fifty (50) cubic centimeters, and that is capable of moving the vehicle at a speed of no more than twenty-five miles per hour (25 mph) on level ground when propelled exclusively by the motor or engine.

**Nighttime** - the hours from 9:00 p.m. to 7:00 a.m.

**Noise** - this term shall have the same definition as "sound."

**Noise disturbance** - any sound that endangers or injures the safety or health of humans or animals; or endangers or injures personal or real property; or that is loud and raucous; or is of a nature that will unreasonably disturb the peace, quiet, or comfort of any neighborhood.

**Noise level** - this term shall have the same definition as "sound level."

**Noise zones** - shall be defined according to the following three categories, as shown, defined, and bounded on the zoning map:

- (a) **Residential, special purpose, or waterfront zone** - any district listed under §§2101.11, 2101.12, or 2101.13, or 2101.16 of the D.C. Zoning Regulations, effective May 12, 1958, as amended;
- (b) **Commercial or commercial-light manufacturing zone** - any district listed under §2101.14 of the D.C. Zoning Regulations, effective May 12, 1958, or classified as a "C-M Commercial-light manufacturing" district under §2101.15 of the Zoning Regulations; and
- (c) **General industrial zone** - any district classified under §2101.15 of the Zoning Regulations, effective May 12, 1958, but not classified as a "C-M Commercial-light manufacturing" district.

**Person** - an individual, partnership, corporation, trust, association, firm, organization, government, or other entity.

**Pre-existing source** - any noise source either established and in operation or under construction prior to May 15, 1978.

3099 DEFINITIONS (Continued)

**Real property boundary** - an imaginary line along the ground surface and its vertical extension, which separates the real property owned by one (1) person from that owned by another.

**Sound** - an oscillation in pressure, particle displacement, particle velocity, or other physical parameter, in a medium with internal forces that causes compression and rarefaction of that medium. The description of sound may include any characteristic of the sound, including duration, intensity, and frequency.

**Sound level** - the weighted sound pressure level obtained by the use of a sound level meter and frequency weighting network, such as A, B, or C as specified in the ANSI specifications for sound level meters (ANSI S1.4-1971, or the latest approved revision of ANSI S1.4 standard). If the frequency weighting employed is not indicated, the A-weighting shall apply.

**Sound-level meter** - an instrument to measure the sound pressure level meeting at least either the Type II requirements of the ANSI S1.4-1971 standard or the latest approved version of the ANSI S1.4 standard.

**Street or highway** - any road, street, alley, or way in the District of Columbia, open to the use of the public, as a matter of right, for the purposes of vehicular traffic.

**Weekday** - any day except Sunday or a legal holiday.

**Zoning regulations** - the D.C. Zoning Regulations, effective May 12, 1958, as amended (DCMR Title 11).

*Feb 11/1959  
dbr  
Nursing Home*

**3100 MUSICAL INSTRUMENTS, LOUDSPEAKERS, AND AMPLIFIERS**

3100.1 Noise resulting from the musical instruments, loudspeakers, and amplifiers shall not exceed the maximum noise levels contained in this section.

3100.2 The use, operation, or playing of, or the permitting to be used, operated, or played, any musical instrument or device, loud speaker, sound amplifier, or other similar machine or device for the production or reproduction of sound on private property or public space shall be prohibited in excess of seventy-eight (78) dB(A) at a distance of not less than one (1) meter from the source, building, or structure from which it emanates.

3100.3 The limitation of §3100.2 shall not apply to parades or public gatherings involving more than two hundred (200) people on public space for which a permit has been granted.

**3101 MECHANICAL EQUIPMENT**

3101.1 Noise resulting from mechanical equipment shall not exceed the maximum noise levels contained in this section.

3101.2 Noise resulting from the use or operation of any air-conditioning, refrigerator, heat pump, fan, swimming pool equipment, or other mechanical equipment, regardless of location, shall be prohibited in excess of sixty (60) dB(A) when measured at the property line or as close to the property line as practical if there is an obstruction.

3102 CONSTRUCTION *Needs a permit for construction law needs to be changed as far as location is concerned or requiring some sort of enclosure on outside*

3102.1 From 7:00 a.m. to 7:00 p.m. on any weekday, noise levels resulting from construction or demolition (excluding pile driver devices) shall not exceed a Leg(1) of eighty (80) dB(A) unless granted a variance under §3005 of chapter 30 of this title.

3102.2 From 7:00 p.m. to 7:00 a.m., the maximum noise levels prescribed in §3001 of chapter 30 of this title shall apply. *65 dB(A) - NIGHT*

*PAD - Penna ave Development  
31-1  
Residential A5D High Density - Hotels  
considered commercial zone*

**3102 CONSTRUCTION (Continued)**

- 3102.3 In cases involving noise from construction or demolition, measurements shall be made twenty-five feet (25') from the outermost limits of the construction site.
- 3102.4 No permit for building construction or demolition shall be issued until the permit applicant has assured in writing that the noise emanating from the planned construction will comply with the limitations established by this section.

**3103 CONSTRUCTION IN RESIDENTIAL ZONES**

- 3103.1 Noise emanating from construction in residential zones shall be prohibited during the hours specified in this section irrespective of its compliance with §3001 of chapter 30 of this title.

*19-500* 3103.2 No noise from construction, excluding minor home repairs, shall be permitted within a residential, special purpose, or waterfront zone on any Sunday or legal holiday, or after 7:00 p.m. and before 7:00 a.m. on any weekday.

*DAY 60 dBA) night 50 dBA)*

- 3103.3 The limitation of §3103.2 shall not apply to the following:

- (a) Portable power tools used for minor improvement of real and personal residential property otherwise allowable under this section;
- (b) Work performed by public utilities as defined in the Act approved March 4, 1913 (37 Stat. 974; D.C. Code, §43-103);
- (c) Work performed by the Washington Metropolitan Area Transit Authority as defined in D.C. Code, §§1-1410 et seq.); or
- (d) Work performed by the subcontractors of public utilities and the Washington Metropolitan Area Transit Authority as provided in §§3103.3(b) and 3103.3(c).

- 3103.4 Noise emanating from the sources exempted in §3103.3 shall comply with the maximum noise levels prescribed in §3001 of chapter 30 of this title.

**3104 EXPLOSIVES**

- 3104.1 Noise emanating from explosives shall be prohibited during the hours specified in this section irrespective of its compliance with §3001 of chapter 30 of this title.

*19-500* 3104.2 No blasting with explosives shall be performed on any Sunday or legal holiday or at nighttime on weekdays, except by special permit as provided in §1301 of the Second Amendment to the 1972 Building Code of the District of Columbia (Title 12 DCMR).

VU-11-  
**3105 HAWKERS, PEDDLERS, AND VENDORS**

3105.1 The shouting and crying of hawkers, peddlers, and vendors shall be prohibited at nighttime on any day of the week, irrespective of its compliance with §3001 of chapter 30 of this title.

3105.2 The limitation of §3105.1 shall not be construed to prohibit selling by outcry of merchandise, food, and beverages at licensed sporting events, parades, fairs, circuses, or other similar licensed entertainment events.

**3106 TRASH COLLECTION**

3106.1 Noise emanating from trash collection in any residential, special purpose, or waterfront zone shall be prohibited during the hours specified in this section irrespective of its compliance with §3001.

500-00  
3106.2 No person shall operate or permit the operation of any refuse collection vehicle in any residential, special purpose, or waterfront zone at nighttime on any day of the week. This prohibition shall not apply to vehicles owned by the District government employed for emptying litter receptacles.

**3107 VEHICLE-MOUNTED LOUD SPEAKERS**

3107.1 Noise emanating from vehicle-mounted sound amplifying equipment, instruments, and transmitting devices shall be prohibited during the hours specified in this section irrespective of its compliance with §3001 of chapter 30 of this title.

3107.2 Vehicle-mounted sound amplifying equipment, instruments, and transmitting devices shall be prohibited in streets or on highways after 9:00 a.m., and between 4:00 p.m. and 6:30 p.m.  
9:00 PM TO 9:30 AM TO

3107.3 During hours other than those specified in §3107.2, the use of vehicle-mounted sound amplifying equipment, instruments, and transmitting devices shall be subject to the limitations in §3001 of chapter 30 of this title, and the following conditions:

- (a) The vehicles are required, where traffic conditions permit, to move at least five miles per hour (5 mph);
- (b) When the vehicles are stopped for any cause, no sound shall be amplified or transmitted for more than one (1) minute, so long as the vehicle remains stationary;
- (c) Operators of the vehicles shall not hold sound amplifying equipment, instruments, or transmitting devices by hand while the vehicles are in operation; and
- (d) When vehicles are parked in legal off-street locations, the conditions set forth in §3107 of this chapter shall not apply.

3110 NEW MOTOR VEHICLES

500,000  
3110.1 No person shall either sell or offer for sale a new motor vehicle or motorcycle that is to be registered for use upon the public highway that exceeds the maximum noise limits designated in the table of §3110.2 when measured at a distance of fifty feet (50') from the center line of travel in accordance with test procedures (as may be appropriate for the vehicle being tested) as prescribed in this subsection:

- (a) Those described by the Society of Automotive Engineers, Inc. (SAE), including SAE Standard J986(a) (for vehicles 10,000 GVWR and under), SAE Standard J331 (for motorcycles), and SAE Standard J184 (for vehicles over 10,000 GVWR);
- (b) Those recommended by Practice J184 (for qualifying a sound data acquisition system), and subsequent revisions of the standard; or
- (c) A nationally recognized test procedure, such as those promulgated by the EPA, as the administering agency may prescribe in accordance with §§3000.7 through 3000.9 of chapter 30 of this title.

500,000  
3110.2 Each manufacturer, distributor, or importer, or his or her designate agent, shall certify in writing to the Mayor that all motor vehicles or motorcycles sold by him or her in the District comply with the provisions of the following table:

<u>TYPE OF VEHICLE and DATE OF MANUFACTURE</u>	<u>MAXIMUM NOISE LEVEL</u>
Any motorcycle, other than a motorized bicycle, manufactured after 1976	83 dB(A)
Any motor vehicle with a gross vehicle rating of more than 10,000 pounds manufactured on or after January 1, 1978	83 dB(A)
Any motor vehicle with a gross vehicle weight rating of more than 10,000 pounds manufactured on or after January 1, 1982	80 dB(A)
Any other motor vehicle weighing 10,000 pounds or less manufactured on or after January 1, 1976	83 dB(A)
Any other motor vehicle weighing 10,000 pounds or less manufactured after January 1, 1978	80 dB(A)

## 3111 OPERATIONAL LIMITS FOR MOTOR VEHICLES

- 3111.1 No person shall operate a motorcycle, motor vehicle, or combination of motor vehicles of a type subject to registration under D.C. Code, §§40-103 at any time, or under any condition of grade, load, acceleration, or deceleration in a manner that exceeds the maximum noise limits designated in the table of this subsection for the specified speed limits, measured at a distance of fifty feet (50') from the center line of travel by a sound level meter switched to the A-weighting network, in accordance with such nationally recognized test procedures as the administering agency may prescribe in accordance with §§3000.7 through 3000.9 of chapter 30 of this title.

*where are these test procedures*

<u>TYPE OF VEHICLE</u>	<u>NOISE LIMIT</u>		
	<u>35 MPH or less</u>	<u>Over 35 MPH</u>	<u>Stationary Run-up</u>
Any motor vehicle with a manufacturer's gross vehicle weight rating of 10,000 pounds or more, and any combination of vehicles towed by that motor vehicle	86 dB(A)	90 dB(A)	<del>88</del> dB(A)
Any motorcycle	82 dB(A)	86 dB(A)	--
Any other motor vehicle and any combination of vehicles towed by a motor vehicle with a manufacture's gross weight rating of 10,000 pounds or more	76 dB(A)	82 dB(A)	

- 3111.2 Where a test procedure is used for which the noise levels prescribed in the table in §3111.1 would not be appropriate, the administering agency may establish and publish a table with the appropriate levels which are substantially equivalent to those established in that table.
- 3111.3 The public shall be provided with at least thirty (30) days to comment on all new standards and procedures before the standards are made final.
- 3111.4 For the purposes of this section, a motor truck, truck tractor, or bus that is not equipped with an identification plate or marking that bears the manufacturer's gross vehicle weight shall be considered as having a rating of ten thousand (10,000) pounds or more if the unladen weight is more than nine thousand (9,000) pounds.

3111 OPERATIONAL LIMITS FOR MOTOR VEHICLES (Continued)

3111.5 No person shall operate a motor vehicle equipped with an engine speed governor that generates a sound level in excess of 88 dB(A) measured on an open site with a fast meter response at fifty feet (50') from the longitudinal center line of the vehicle when its engine is accelerated from idle to a wide-open throttle governed speed with the vehicle stationary, transmission in neutral, and clutch engaged.

3111.6 The administering agency may by regulation prescribe correctional factors to the limits prescribed in the table of 3111.1 of this section when measurements are made at a site that contains large reflecting surfaces in close proximity to the vehicle or noise measuring microphone.

3111.7 A violation of the adjusted levels as provided in §3111.6 shall constitute a violation of this section.

3111.8 In the event that it is impractical to obtain a measurement fifty feet (50') from the center line of travel, the actual distance shall be measured and one (1) of the correctional factors in the following table shall be applied to the maximum permissible sound levels prescribed in the table of 3111.1 of this section.

<u>DISTANCE</u>	<u>CORRECTION</u>	
	<u>Soft site</u>	<u>Hard site</u>
35 - less than 39 ft.	+3 dB(A)	+5 dB(A)
39 - less than 43 ft.	+2 dB(A)	+4 dB(A)
43 - less than 48 ft.	+1 dB(A)	+3 dB(A)
48 - less than 58 ft.	0 dB(A)	+2 dB(A)
58 - less than 70 ft.	-1 dB(A)	+1 dB(A)
70 - less than 83 ft.	-2 dB(A)	0 dB(A)

3111.9 For the purposes of this section, "soft test site" shall mean any test site having the ground surface covered with grass, another ground cover, or a similar absorption material for one-half (1/2) or more of the distance between the microphone target point and the microphone location point.

3111.10 For the purposes of this section, "hard test site" means any test site having the ground surface covered with concrete, asphalt, packed dirt, gravel, or similar reflective material for more than one-half (1/2) the distance between the microphone target point and the microphone location point.



## **3112 ALTERATION OF MOTOR VEHICLE EXHAUST SYSTEM**

*C. Doe*  
**3112.1** No person shall modify or alter the exhaust system of a motor vehicle or motorcycle in a manner that will amplify or increase the noise emitted by the vehicle above the level permitted under §3111 of this chapter.

*# C. Doe*  
**3112.2** No person shall use or operate a motor vehicle or a motorcycle having an exhaust system that has been modified or altered in a manner that will amplify or increase the noise emitted by the vehicle above the level permitted under §3111 of this chapter.

## **3113 MOTOR VEHICLE INSPECTION**

**3113.1** The Mayor shall conduct a study to determine the advantages and feasibility of requiring a noise inspection as a part of the annual motor vehicle inspection program.

**3113.2** The study required by §3113.1 shall be submitted to the D.C. Council not later than six (6) months after May 15, 1978, and shall include the following:

- (a) An estimate of the cost to the District of requiring a motor vehicle inspection program for noise (computing separately the cost for District-owned motor vehicles in contrast to the cost of all vehicles);
- (b) An estimate of the length of time that would be required per vehicle for the test, and the impact this would have on the total inspection program;
- (c) The test procedures that would be used;
- (d) An estimate of the number of cars that would fail the test, and the appropriate cost to each registrant to bring a car into compliance;
- (e) The impact of the program on the repair stations in the District; and
- (f) The impact of the program on noise levels in the District.

## **3199 DEFINITIONS**

**3199.1** The meanings ascribed to the definitions appearing in §3099.1 of chapter 30 of this title shall apply to the terms in this chapter.

## CHAPTER 32 NOISE MEASURING TEST PROCEDURES

### 3200 GENERAL PROVISIONS

3200.1 The purpose of this chapter is to establish standard testing procedures for measuring noise levels as prescribed under the provisions of chapters 30 and 31 of this title, the D.C. Noise Control Act of 1977 (D.C. Law 2-53, March 23, 1978).

3200.2 The intent of this chapter shall be to do the following:

- (a) Specify straight-forward procedures that are applicable to the large majority of expected situations; and
- (b) Specify the limits of applicability of those procedures, such as situations in which acoustical specialists or specialized equipment may be required to supplement the procedures.

3200.3 The measurement procedures provided in this chapter shall be reviewed periodically with reference to changes in the practice of noise measurement, instrumentation, District code, and legal precedent.

3200.4 The measurement of noise produced by motor vehicles in transit shall be prescribed by District and federal laws. Enforcement by police officers shall be provided by District law.

3200.5 Any situation in which the noise source cannot be demonstrated to increase the total noise at the measurement point by at least four (4) dB(A) over the ambient level shall be considered unmeasurable by the techniques described in this chapter.

3200.6 Any situation in which readings exceed the statutory limits, but are less than the statutory limit plus the grace limit, the noise shall be measured with more specialized or more accurate equipment prior to deciding whether the source is in compliance with the Act.

3200.7 When readings exceed the statutory limits, but are less than the statutory limit plus the grace limit, consultation with qualified professional personnel shall be required.

### 3201 EQUIPMENT

3201.1 Sound-level meters and microphones shall meet Type II specifications per ANSI S1.4-1971.

3201.2 Each sound-level meter shall be qualified annually.

## **3201 EQUIPMENT (Continued)**

**3201.3** Each sound-level meter and microphone device shall meet the following specifications:

- (a) External calibration devices with a known sound pressure level output at a single known frequency between 200 Hz and 1000 Hz, as specified by the manufacturer;
- (b) Windscreen with insertion loss less than 0.5 dB below 8 kHz;
- (c) Stopwatch, capable of cumulative operation and accurate to two percent (2%) or better;
- (d) Wind speed indicator with at least twenty percent (20%) accuracy at twelve miles per hour (12 mph); and
- (e) Earphones with impedance meeting the sound level meter manufacturer's specifications.

## **3202 SOUND LEVEL METER CALIBRATION**

**3202.1** A battery check shall be performed immediately before and after a series of measurements at each test site.

**3202.2** An external calibration shall be made immediately before a series of measurements at each test site and, if necessary, the meter shall be adjusted to read within 0.2 dB(A) of the level specified by the calibration unit.

**3202.3** Measurements may be assumed to be valid if a calibration check after a series of measurements agrees to within 0.5 dB(A), otherwise measurements shall not be used.

**3202.4** Calibration checks also may be made immediately after the series of measurements and at least one (1) time per hour during the measurement series to ensure continuing accuracy of the equipment.

## **3203 EQUIPMENT SETTINGS**

**3203.1** In measuring impulsive or rapidly fluctuating noise, the following procedures shall be followed:

- (a) A windscreen shall be used for all outdoor measurements;
- (b) The "C" scale shall be used on the sound level meter;
- (c) The attenuator shall be set so that the measured levels fall between the zero mark and the full scale mark on the meter scale; and
- (d) The fast meter response shall be used on the sound level meter.

### **3203 EQUIPMENT SETTINGS (Continued)**

**3203.2** In measuring steady (including intermittent, slowly fluctuating, or quasi-steady) noise, the following procedures shall be followed:

- (a) A windscreen shall be used for all outdoor measurements;
- (b) The "A" scale shall be used on the sound level meter;
- (c) The attenuator shall be set so that the measured levels fall between the zero mark and the full scale mark on the meter scale. At least five (5) seconds shall elapse after the attenuator is changed before measurements are taken; and
- (d) The slow meter response shall be used on the sound level meter.

### **3204 MEASUREMENT LOCATIONS**

**3204.1** Measurements shall be taken at the following locations:

- (a) At the property line of the property on which the noise source is located, or as close as practicable if there is an obstruction;
- (b) At a distance of one (1) meter from any musical instrument or device, or loud speaker, sound amplifier, or other similar machine or device for the production or reproduction of sound, with exceptions as designated in the Act;
- (c) At a distance of twenty five feet (25') from the outermost limits of a construction site; and
- (d) At a distance of fifty feet (50') from the center line of traffic for motor vehicles.

**3204.2** The microphone shall be at least three feet (3') above the surface while measurements are being taken, except for motor vehicle stationary tests which shall be determined.

**3204.3** The microphone orientation shall be as specified by the manufacturer.

**3204.4** Measurements conducted on private property shall be taken with the permission of the owner or the owner's representative, or under the authority of a search warrant or a court order.

**3204.5** Outdoor measurements shall not be conducted in the presence of wind speeds greater than twelve miles per hour (12 mph), nor in the presence of precipitation or fog.

## 3205 MEASUREMENT PROCEDURES

- 3205.1 Unless impracticable, earphones shall be used occasionally while noise measurements are being taken as a periodic check to ensure that the meter is responding properly to the noise source being monitored.
- 3205.2 In the case of steady (including intermittent, slowly fluctuating, or quasi-steady) noise, a measurement of the ambient noise level shall be required.
- 3205.3 If the ambient noise level of steady noise is within ten (10) dB of the source sound level, the corrections specified in the table of §3205.7 of this section shall be applied to determine the noise level due solely to the source being investigated, and the source shall be interpolated as necessary.
- 3205.4 If the ambient level of steady noise is less than three (3) dB from the noise source, no correction may be made and measurements cannot indicate true source noise level.
- 3205.5 Before citing a violation of a noise limit which may not be exceeded regardless of duration, a 2.5 dB(A) grace shall be allowed to account for all possible meter inaccuracies.
- 3205.6 Several measurements showing a violation shall be taken with at least twenty (20) seconds between each measurement.
- 3205.7 The following table shall be used for making corrections to measured ambient sound pressure levels:

Difference (in Decibels) between Sound Pressure Level Measured with Sound Source Operating and Ambient Sound Pressure Level Along dB(A)	Correction (in Decibels) to be Subtracted from Sound Pressure Level Measured with Sound Source Operating to Obtain Sound Pressure Level Due to Sound Source Alone dB(A)
Less than 4	Measurement can not be made
4	2.2
5	1.7
6	1.3
7	1.0
8	0.8
9	0.6
10	0.4
more than 10	.0

## **3206 DATA AND REPORTS**

**3206.1** The operator shall be required to fill out all pertinent information on the noise data form for field measurements.

**3206.2** For each set of readings, the following information shall be required:

- (a) Date, time, location, operator's name;
- (b) Wind speed and direction;
- (c) All instrumentation models and identifying numbers;
- (d) A sketch of the site, including measurements points, noise sources, buildings, etc.;
- (e) Measurement of noise peaks and steady levels to the nearest decibel, and durations;
- (f) A description of special techniques employed;
- (g) A description of the noise, noting especially if there is an apparent pure tone or impulsive content;
- (h) The meter damping used (fast or slow); and
- (i) Measurement of ambient and description of ambient if obvious (highway, dogs, etc.).

**3206.3** If the ambient level is 4-10 dB below the level found with the source operating, corrections shall be made to obtain the source noise level. The corrections shall be shown.

## **3299 DEFINITIONS**

**3299.1** The meanings ascribed to the definitions appearing in §3099.1 of chapter 30 of this title shall apply to the terms in this chapter.

**3299.2** In addition to the definitions cited in chapter 30, the following words shall have the meaning ascribed:

**Ambient** - the noise remaining when the source being measured is turned off.

**Calibration, external** - the testing under controlled conditions of the sound level monitoring system, by use of a calibration device, whose input sound pressure level and frequency are accurately known, for the purpose of ascertaining the accuracy of the system at the input level and frequency within the meaning of the Act. The system includes a microphone, microphone cable, and sound level meter and its internal components.

**Descriptors, acoustical:** The following descriptors are often used:

<b>dB(A)</b>	A-weighted sound level measured in decibels;
<b><u>L<sub>d</sub></u></b>	daytime equivalent A-weighted sound level between the hours of 0700 and 2100;
<b>L<sub>dn</sub></b>	day-night average sound level; the twenty-four (24) hour weighted equivalent sound level, with a ten (10) decibel penalty applied to nighttime levels;
<b>L<sub>eq</sub></b>	equivalent A-weighted sound level over a given period of time;
<b>L<sub>eq</sub>(1)</b>	the L <sub>eq</sub> (1) is used in measuring construction noise and is the value of a steady state sound which has the same A-weighted average sound energy as that contained in a time varying sound. In this case, it is the equivalent sound level measured over a one (1) hour period. It is measured best with a statistical noise analyzer;
<b>L<sub>n</sub></b>	nighttime equivalent A-weighted sound level between the hours of 2100 and 0700;
<b>L<sub>max</sub></b>	maximum A-weighted sound level for a given time interval or event; and
<b>L<sub>x</sub></b>	x percent sound level, the A-weighted sound level equaled or exceeded x% of time. For example: L <sub>10</sub> : sound level exceeded ten (10) percent of time (usually the loudest level); L <sub>50</sub> : sound level exceeded fifty (50) percent of time; and L <sub>90</sub> : sound level exceeded ninety (90) percent of the time (usually the quietest level).

**Intermittent noise** - a noise that goes on and off but that is steady while it is on.

**Large reflecting surface** - a surface that may cause an interference with the noise measurements being taken (a wall, for example).

**Pure tone** - a single frequency that predominates to the extent that it is audible. Pure tones are characterized by the following: a hum, moan, howl, whine, or whistle, depending on their frequency.

**Qualified** - calibrated by an authorized acoustical standards laboratory or an authorized factory representative.

**Quasi-steady noise** - a rapid series of impulses that has the same effect on the sound level meter as a steady noise.

**3299     DEFINITIONS     (Continued)**

**Qualification** - a comprehensive series of tests (including calibration using the full frequency response of a microphone, plus meter, plus A-weighted network) demonstrating compliance with ANSI specifications in addition to, but not required, calibration within the meaning of the Act.

**Rapidly fluctuating** - continuous noise whose level varies rapidly over a range greater than three (3) dB(A) read on the fast scale during the course of the measurements.

**Slowly fluctuating** - continuous noise whose level varies slowly over a range greater than three (3) dB(A) read on the slow scale during the course of the measurements.

**Steady noise** - a noise whose level varies less than three (3) dB(A) read on the slow scale during the course of the measurements.

**Source of violation** - consists of a single source, or of several distinct sources if all are being operated on the property from which the noise originates.