

ILLINOIS POLLUTION CONTROL BOARD
February 20, 2003

IN THE MATTER OF:)
)
PROPOSED NEW AND UPDATED RULES)
FOR MEASUREMENT AND NUMERICAL)
SOUND EMISSIONS STANDARDS) R03-9
AMENDMENTS TO 35 ILL. ADM.) (Rulemaking - Noise)
CODE 901 and 910)

Proposed Rule. Proposal for Public Comment.

ORDER OF THE BOARD (by M.E. Tristano, G.T. Girard, T. E. Johnson):

The Board opened this rulemaking to propose updated regulations governing noise found in 35 Ill. Adm. Code Subtitle H, pursuant to Sections 27 and 28 of the Illinois Environmental Protection Act, (415 ILCS 5/27-5/28 (2002) and 35 Ill. Adm. Code Part 102 Subpart B. Many of the sound measurement definitions and techniques in the Board's current rules do not reflect present scientific standards. The instant rulemaking is closely associated with recently opened docket Noise Rule Update Amendments to 35 Ill. Adm. Code 900 and 903, R03-08 (R03-8) that defines acoustical terms, pollution sources and sound measurement procedures. R03-8 is also based on updated science, including pertinent American National Standards Institute updates from 1998-2001, and other current scientific publications. Noise Rule Update Amendments to 35 Ill. Adm. Code 900 and 903, R03-08 (Dec. 19, 2003) *slip op* at 2.

The instant proposal revises outdated numerical sound emission standards for property line noise sources found at 35 Ill. Adm. Code Parts 901. In addition, the proposal adds Part 910 to the Board's rules that incorporates noise measurement techniques currently contained only in Illinois Environmental Protection Agency (Agency) rules at 35 Ill. Adm. Code 951.

BACKGROUND

The Board's noise rules have not been updated since 1983 and 1987. In 1990, the Department of Energy and Natural Resource¹ (DENR) contracted Dr. Paul Schomer of the University of Illinois to examine the adequacy of Illinois noise regulations, and, particularly whether the existing rules were adequate to regulate discontinuous noise. Dr. Schomer's report, "Impulse Noise Study", (ILENR/RE-EA-90-16, printed November 1990, Springfield, IL) suggested some adjustments in the Board's noise regulations. In 1991, DENR contracted for an additional report by Dr. Schomer, entitled, "Proposed Revisions to Property Line Noise Source Measurement Procedures", (ILENR/RE-EA-91/10, printed June 1991, Springfield, IL), describing and developing a systematic set of procedures for noise measurements.

¹ In 1995, the Department of Natural Resources Act P.A. 89-50 (eff. July 1, 1995) (20 ILCS 5/801 *et seq.* (2002) merged DENR into the Department of Natural Resources.

During the summer of 1991, the Board prepared a proposal that attempted to translate the Schomer reports into regulatory language (Amendments to 35 Ill. Adm. Code Subtitle H Noise-Pertaining to Definitions, Measurement Procedures, and Sound Emission Standards Relating to Certain Noise Sources, R91-25 (Oct. 24, 1991)). An inquiry hearing based on the document was held on November 25, 1991, in Chicago, Illinois, in which testimony was presented. The Board's proposal was based on revising the noise measurement procedures at Section 900.103(b) and the impulsive sound standards at Section 901.104. In addition, the Board proposed incorporating Agency noise measurement procedures found at 35 Ill. Adm. Code 951 into Board regulations at 35 Ill. Adm. Code Part 910, by modifying the Part 951 language to incorporate the recommendations contained within the Schomer reports. In 1992, the Board closed the R91-25 docket before proceeding to first notice with proposed changes to the Board's noise rules.

The need to update the Board's noise rules to conform to current scientific procedures has become more apparent during the past ten years. The Board has identified necessary improvements in several areas. In the instant rulemaking, the Board proposes changes in Parts 901 and 910. In Part 901, the Board proposes to replace the references to the Standard Land Use Coding System (SLUCM) codes with the more appropriate Land-Use Based Classification System. New rules in Part 910 are proposed to incorporate Agency noise measurement procedures found at 35 Ill. Adm. Code 951. In the companion rulemaking, R03-08, which went to first notice on December 19, 2002, the Board proposed changes in Parts 900 and 903 of the noise rules. In Part 900, definitions and technical references have been updated. Part 903 needs to be repealed because the Illinois legislature has removed the authority for the rules.

DISCUSSION

The Board will explain each section of the rule in the following discussion.

35 Ill. Adm. Code 910: Measurement Procedures for the Enforcement of 35 Ill. Adm. Code 900 & 901

The proposed new Part 910 sets forth the measurement procedures for enforcing the Board's noise standards in Parts 900 and 901. These procedures are essentially based upon the Agency's noise measurement protocols at 35 Ill. Adm. Code 951. As noted above, the Board has made a number of substantive changes to the Agency's measurement protocols to reflect the recommendations of the DENR's noise reports. A brief description of the proposed procedures is provided below.

Section 910.100 **General**

This Section sets forth the scope of the proposed noise measurement procedures and techniques. The Board has deleted references to “Agency personnel”, since the measurement procedures are applicable to any person conducting noise measurements to demonstrate compliance with Parts 900 and 901.

Section 910.101 **Personnel Qualification**

The Board decided not to incorporate the Agency’s personnel qualification requirements in the instant proposal since they are specific to Agency personnel, and also because the requirements are not based on any State approved licensing or certification.

Section 910.102 **Instrumentation**

This section sets forth the requirements for sound measuring equipment, sound indicating devices such as magnetic tape recorder or graphic level recorder, and weather measuring instruments. These requirements are the same as that in Part 951, except for the updated references to the ANSI (American National Standards Institute), and the International Electrotechnical Commission (IEC) standards. See changes at Section 910.102(a).

Section 910.103 **Definitions**

The Board has moved all pertinent definitions found in the Agency’s regulations to 35 Ill. Adm. Code 900.103, which contains the definitions applicable to the Board’s noise regulations.

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

This section clarifies that while sound pressure level measurements are not required to establish a violation of the Board’s nuisance noise standard at 35 Ill. Adm. Code 900.102, such measurements may be used as corroborating evidence. In this regard, the proposal requires a person conducting sound measurements to comply with the instructions of the sound measurement equipment manufacturer. Further, Section 910.104 sets forth that the measurement techniques proposed at Section 910.105 may be used as guidance. While the proposed approach deviates from the detailed sound measurement requirements specified in Part 951, the Board believes that the proposed approach is consistent with the Board’s precedence and case law concerning nuisance noise complaints.

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

The measurement techniques for obtaining sound pressure levels to demonstrate compliance with Part 901 standards are essentially the same as the Agency’s regulations, except for the deletion of measurement procedures for steady sound, fluctuating sound,

intermittent sound, impulsive sound, and quasi steady sound set forth at Sections 910.105 (d)(3) through (d)(7), respectively. The Board notes that these measurement procedures are addressed by the measurement techniques for highly-impulsive sound set forth at Section 910.107.

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

This section sets forth a systematic set of procedures for determination of equivalent sound level (L_{eq}) using as an example the determination of a 1-hour L_{eq} corrected for background ambient sound. The proposed protocols are based on the recommendations of the Department’s noise study entitled “Proposed Revisions to Property Line Noise Source Measurement Procedures.” These protocols prescribe detailed data collection requirements, and equations for averaging sound data on an energy basis. In addition, Section 910.106 prescribes procedures correcting the raw equivalent sound level for background ambient sound. The proposal also prescribes detailed procedures for measuring background ambient sound that include both direct measurement methods and the use of Tables of long-term background ambient.

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

Two equally valid methods are proposed for measuring highly-impulsive sound. The first method, termed as the “General Method” at Section 901.107(b), provides for A-weighted L_{eq} measurement using the procedures set forth in Sections 910.105 and 910.106. The second method, which is referred to as the “Controlled Test Method” at Section 910.107(c), involves the determination of total sound exposure per hour. Again, the Board notes that the proposed protocols are based on the Department’s noise study.

35 Ill. Adm. Code 901: Sound Emission Standards and Limitations for Property Line-Noise-Sources

The proposed changes to Part 901 update the existing Standard Land Use Coding Manual (SLUCM) based land classification, and revise the impulsive sound standards. A brief description of the proposed changes is provided below.

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

The changes proposed to this section update the existing land use classification, which is based on SLUCM codes, with the Land-Based Classification Standards (LBCS) codes. The Board notes that the LBCS, which replaced the 1965 SLUCM, provides a consistent model for classifying land uses based on a multi-dimensional land use classification model. While the LBCS provides for classification of land use based on activity, function, structure type, site development character, and ownership, the Board is proposing to update the SLUCM codes with the LBCS function codes. In this regard, the Board believes that the LBCS functional categories are very similar to the SLUCM categories listed in the existing regulations at Part 901, Appendix B.

Consistent with the changes proposed to Section 901.101, the instant proposal also updates the SLUCM Codes Table in Part 901, Appendix B with the LBCS function codes. For more detailed information concerning the LBCS, the Board directs interested persons to review the LBCS executive summary or visit the LBCS web page (www.planning.org/LBCS).

Section 901.104 **Highly-Impulsive Sound**

The proposed changes to Section 901.104 clarify that the impulsive sound standards are based on 1-hour A-weighted equivalent sound levels, and revise the numeric standards. The revisions to the numeric limits for highly-impulsive sound are based on the recommendations of the Department's Impulse Noise Study. These revisions are intended to bring highly impulsive noise standards into conformity with the standards set forth in Sections 901.102 and 901.103 in terms of the effective community response. A more detailed discussion of the proposed revisions may be found in the proposal.

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

Based on the recommendations of the Department's noise study, the Board has revised the peak level limits to be consistent with the U.S. Bureau of Mines requirements. The proposal also specifies lower limits for multiple events in one day. In addition, the instant proposal clarifies when the daytime and nighttime hours begin and end. The Board has also changed the reference to SLUCM codes to LBCS codes.

CONCLUSION

The Board will proceed to public notice with the following proposal. The Board will hold hearings and accept comment on the proposal prior to determining whether or not to proceed to first notice.

To facilitate understanding of the possible modifications to Ill. Adm. Code 35 Part 951 suggested as part of this Rulemaking, the Board edited that document using the traditional strike through and underlining approach to new language. The Board encourages interested persons to contact the hearing officer to be added to the notice list.

ORDER

The Board adopts this proposal for public comment. The Board intends to conduct two pre-first notice hearings on the proposal, one in Chicago and one in Springfield.

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	<u>Highly</u> - Impulsive Sound
901.105	Impact Forging Operations
901.106	Prominent Discrete Tones
901.107	Exceptions
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901.109	<u>Highly</u> - Impulsive Sound from Explosive Blasting
901.110	Amforge Operational Level
901.111	Modern Drop Forge Operational Level
901.112	Wyman-Gordon Operational Level
901.113	Wagner Casting Site-Specific Operational Level
901.114	Moline Forge Operational Level
901.115	Cornell Forge Hampshire Division Site-Specific Operational Level
901.116	Forgings and Stampings, Inc. Operational Level
901.117	Rockford Drop Forge Company Operational Level
901.118	Atlas Forgings Division of Scot Forge Operational Level
901.119	Clifford-Jacobs Operational Level
901.120	C.S. Norcross Operational Level
901.121	Vaughan & Bushnell Operational Level
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. 1985, 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. 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; amended in R83-35 at 8 Ill. Reg. 18893, effective September 25, 1984; amended in R83-33, 26, 29, 30 and R83-34 at 9 Ill. Reg. 1405, effective January 17, 1985; Section 901.105(f)(1), (2) and (3) recodified to Sections 901.110, 901.111 and 901.112 at 9 Ill. Reg. 7147; amended in R83-25, 31 and 32 at 9 Ill. Reg. 7149, effective May 7, 1985; amended in R83-7 at 11

Ill. Reg. 3136, effective January 28, 1987; amended in R03-9 at _____ see Reg. _____, effective _____.

Section 901.101 Classification of Land According to Use

- a) Class A land ~~will~~ shall include all land used as specified by Land-Based Classification Standard (LBCS) Codes 1000 through 1340, 2400 through 2455, 5200 through 5230, 5500, 6000 through 6145, 6222, 6500 through 6530, 6568 through 6600, SLUCM Codes 110 through 190 inclusive, 651, 674, 681 through 683 inclusive, 691, 711, 762, 7121, 7122, 7123 and 921.
- b) Class B land ~~will~~ shall include all land used as specified by Land-Based Classification Standards (LBCS) Codes 2000 through 2336, 2500 through 2720, 3500 through 3600, 4000, 4220 through 4243, 5000 through 5160, 5300 through 5390, 5400, 6147, 6200 through 6221, 6300 through 6320, 6400 through 6430, 6560 through 6567, 6600 through 6830, 7000 through 7380. 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.
- c) Class C land ~~will~~ shall include all land used as specified by Land-Based Classification Standards (LBCS) Codes 3000 through 3440, 4120 through 4180, 4210 through 4212, 4300 through 4347, 7400 through 7450, 8000 through 8500, and 9000 through 9520. 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.
- d) A parcel or tract of land used as specified by Land-Based Classification Standards (LBCS) SLUCM Code 9000, 9400, or 5500 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 ~~must~~ 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

- a) 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.

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

- b) Except as 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.

Allowable Octave Band Sound Pressure Levels (dB) of Sound Emitted to any Receiving Class A Land from			
Octave Band Center Frequency (Hertz)	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

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 Highly - Impulsive Sound

Except as elsewhere in this Part provided, no person shall cause or allow the emission of highly - impulsive sound from any property-line-noise-source located on any Class A, B, or C land to any receiving Class A or B land which exceeds the allowable 1-hour A-weighted equivalent sound levels (1-hr Leq), 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 <u>1-Hour</u> A-weighted Sound Levels (<u>Leq</u>) in Decibels of <u>Highly-Impulsive</u> Sound Emitted to Receiving Class A or B Land		
	Class B Land	Daytime	Class A Land Nighttime
Class A Land	50 <u>47</u>	50 <u>47</u>	45 <u>37</u>
Class B Land	57 <u>54</u>	50 <u>47</u>	45 <u>37</u>
Class C Land	61 <u>58</u>	56 <u>53</u>	46 <u>43</u>

(Source: Amended at 11 Ill. Reg. 3136, effective January 28, 1987)

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 Highly- Impulsive Sound Levels Emitted
To Class A or B Land from New
Impact Forging Operation

Class B Land	Class A Land	
	Daytime	Nighttime
59.5Leq	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 highly-impulsive sound to any receiving Class A or B land which exceeds the allowable sound levels specified in the following table, when measured at any point within such receiving land, provided however, that no measurement of sound levels shall be made less than 25 feet from such existing impact forging operation's property-line, unless such forging

operation is granted a permanent site specific allowable operational level pursuant to subparagraph (d).

Allowable Highly- Impulsive Sound Levels Emitted
To Class A or B Land from Existing
Impact Forging Operation

Class B Land	Class A Land	
	Daytime	Nighttime
64.5Leq	58.5Leq	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 evaluation 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 in Sections 901.110, 901.111 and 901.112 must comply with the site-specific operational level defined, or is otherwise subject to Section 901.105(c).

(Source: Section 901.105(f)(1), (2), and (3) recodified to Sections 901.110, 901.111 and 901.112 at 9 Ill. Reg. 7147)

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 sub-section, 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 sub-section, 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 August 10, 1974.
- c) Every owner or operator of an existing property-line-noise-source who emits sound which exceeds any allowable octave band sound pressure level of Section 901.102 or 901.103 by 10 dB or more in any octave band with a center frequency of 31.5 Hertz, 63 Hertz or 125 Hertz 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 and 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 or hereafter used as specified by SLUCM Code 291 shall comply with the standards and limitations of this Part on 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 Highly-Impulsive Sound From Explosive Blasting

- a) During the daytime hours, that cover the period after sunrise and before sunset, no person shall cause or allow any explosive blasting conducted on any Class C land 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 Exposure Levels in Decibels of Explosive
Blasting Sounds Emitted to Receiving
Class A or B Land from Any Class C Land
Used as Specified by LBCS SLUCM Code 8300 through 8500 ~~852 or 854~~

Receiving Class A Land 109-107	Receiving Class B Land 114-112
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The allowable sound exposure level limits in the above table shall be lowered by three decibels (3 dB) for each doubling of the number of blasts during the day or night.

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

Equivalent Maximum Sound Pressure Level (Peak) Limits in Decibels

Lower Frequency Limit of Measuring System for Flat Response, a Variation from Linear Response of \pm or - 3dB (Hz)	Receiving Class A Land (dB)	Receiving Class B Land (dB)
\leq 0.1	135	140
\leq 2.0 but greater than 0.1	132	137
\leq 6.0 but greater than 2.0	130	135

The allowable equivalent maximum sound pressure level limits in the above table shall be lowered by two decibels (2 dB) for each doubling of the number of blasts during the day or night.

- c) During the period defined by (1) the beginning of the nighttime hours (10:00 pm) or sunset, whichever occurs earlier and (2) ending of the

nighttime hours (7:00 am) or, ~~after sunset and before sunrise~~, whichever occurs later, 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)

Section 901.110 Amforge Operational Level

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.

(Source: Recodified from Section 901.105(f)(1) at 9 Ill. Reg. 7147)

Section 901.111 Modern Drop Forge Operational Level

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.

(Source: Recodified from Section 901.105(f) (2) at 9 Ill. Reg. 7147)

Section 901.112 Wyman-Gordon Operational Level

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

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

(Source: Recodified from Section 901.105(f)(3) at 9 Ill. Reg. 7147)

Section 901.113 Wagner Casting Site-Specific Operational Level

Wagner Casting Company and future owners of the forging facility located at the southeast corner of Sangamon and Jasper Streets in Decatur, Illinois, must comply with the following site-specific operational level or are otherwise subject to Section 901.105(c):

- a) Shall operate no more than nine forging hammers at any one time; and
- b) Shall operate its forging hammers only between the hours of 5:00 a.m. Monday through 9:00 p.m. Saturday.

(Source: Added at 8 Ill. Reg. 18893, effective September 2, 1984).

Section 901.114 Moline Forge Operational Level

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

- a) Operate no more than nine forging hammers at any one time; and

- b) Operate its forging hammers only between the hours of 6:00 a.m. until 11:00 p.m. Monday through Friday and from 6:00 a.m. until 3:30 p.m. on Saturdays.

(Source: Added at 9 Ill. Reg. 1405, effective January 17, 1985)

Section 901.115 Cornell Forge Hampshire Division Site-Specific Operational Level

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

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

(Source: Added at 9 Ill. Reg. 1405, effective January 17, 1985)

Section 901.116 Forgings and Stampings, Inc. Operational Level

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

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

(Source: Added at 9 Ill. Reg. 1405, effective January 17, 1985)

Section 901.117 Rockford Drop Forge Company Operational Level

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

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

(Source: Added at 9 Ill. Reg. 1405, effective January 17, 1985)

Section 901.118 Atlas Forgings Division of Scot Forge Operational Level

Atlas Forge Division of Scot Forge and future owners of the forging facility located at 1501 South 55th Court, Cicero, Illinois, shall comply with the following site-specific operational level:

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

(Source: Added at 9 Ill. Reg. 1405, effective January 17, 1985)

Section 901.119 Clifford-Jacobs Operational Level

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

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

(Source: Added at 9 Ill. Reg. 7149, effective May 7, 1985)

Section 901.120 C.S. Norcross Operational Level

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

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

(Source: Added at 9 Ill. Reg. 7149, effective May 7, 1985)

Section 901.121 Vaughan & Bushnell Operational Level

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

- a) Operate no more than ten hammers at any one time; and

- b) Operate its forging hammers only between the hours of 6:00 a.m. and 1:30 p.m. Monday through Saturday.

(Source: Added at 9 Ill. Reg. 7149, effective May 7, 1985)

Section 901.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 2	Appendix B

Section 901.APPENDIX B—Standard Land Use Coding System

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~~

<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>
11	Household units.	110	Household units.	1100	Household units. ²		A
12	Group quarters.	121	Rooming and boarding houses.	1210	Rooming and boarding houses. ³	7021	
		122	Membership lodgings.	1221	Fraternity and sorority houses.	⁴ Incl. 7041	
				1229	Other membership lodgings, NEC. ⁵	Incl. 7041	

123	Residence halls or dormitories.	1231	Nurses' homes.
		1232	College dormitories.
		1239	Other residence halls or dormitories, NEC.
124	Retirement homes and orphan ages.	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. ⁶ 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. ⁷
19	Other residential, NEC.	190	Other residential, NEC.
		1900	Other residential, NEC. A

FOOTNOTES

¹The 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 and Industrial Classification Nomenclature.") A dash indicates that there is no corresponding SIC code.

²Code 1100 "Household units" are defined as a house, and 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.

*"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.)

³Code 1210 "Rooming and boarding houses" are those that have 5 or more persons renting rooms, with or without board, and not related to the had or person in charge. Where there are less than 5 roomers, the total quarters are considered as one "Household unit" and is coded 1100.

⁴"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.

⁵"NEC" is an abbreviation for "not elsewhere coded."

⁶Code 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."

⁷Code 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)."

<i>Code</i>	<i>Category</i>	<i>Code</i>	<i>Category</i>	<i>Code</i>	<i>Category</i>	<i>SIC Reference</i> [†]	<i>La Cl</i>
21	Food and kindred products manufacturing.	211	Meat products manufacturing.	2111	Meat packing manufacturing.	2011	
				2112	Sausages and other prepared meat products manufacturing.	2013	
				2113	Poultry and small game dressing packing.		
							and 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	preserves, 2033
				2134	Drying and dehydrating fruits and vegetables.	2034	
				2135	Pickling fruits and vegetables; table sauces and seasonings; salad dressings manufacturing.		vege 2035
				2136	Fresh or frozen packaged fish and seafoods.	2036	
				2137	Frozen fruits, fruit juices, and specialities.		vegetables, 2037
		214	Grain mill products manufacturing.	2141	Flour and other grain mill products.	2041	
				2142	Preparing feeds for animals and fowls.	2042	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.		prod 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	2084	

			manufacturing.		
		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.			
cotton	2093				
		2191	Cottonseed oil milling.	2091	
		2192	Soybean oil milling.	2092	
		2193	Vegetable oil milling (except seed and soybean).		
		2194	Animal and marine fats and oils (including grease and tallow) manufacturing.	2094	
products	2095				
		2195	Roasting coffee and coffee manufacturing.		
		2196	Shortening, table oils, margarine, and other edible fats and oils manufacturing.	2096	
		2197	Ice manufacturing.	2097	
	2098				
		2198	Macaroni, spaghetti, vermicelli, and noodles manufacturing.		
		2199	Other food preparations and kindred products manufacturing, NEC.	2099	

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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
22	Textile mill products manufacturing.	221	Broad and narrow woven fabrics and other small wares (cotton, manmade and 224 manufacturing.	2210	Broad and narrow woven fabrics and other small wares (cotton, fibers, silk, and wool) manufacturing.		
and 221,222,223 ⁹							
		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	2294	
				and flock.		
			2295	Artificial leather and oil cloth manufacturing and other impregnating and coating fabrics (except rubberizing).		
			2296	Tire cording 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 coats, products made from fabrics, leather, and similar materials manufacturing.	231	Men's, youths' and boys' suits, coats, and overcoats manufacturing.	2310	Men's, youth's, and boys' suits, and overcoats manufacturing.	
			232	Men's, youths', and boys' furnishings, garments	2320	Men's, youths', and boys' work clothing, and allied garments manufacturing.
			233	Women's, misses', juniors', girls', children's, and infants' outerwear manufacturing.	2330	Women's, misses', juniors', girls', children's, and infants' outerwear manufacturing.
			234	Women's, misses', children's, and infants' undergarments manufacturing.	2340	Women's, misses', children's, and infants' undergarments manufacturing.
			235	Hats, caps, and millinery manufacturing.	2350	Hats, caps, and millinery manufacturing.
			236	Leather and leather products manufacturing.	2361	Leather tanning and finishing.
					2362	Industrial leather belting and manufacturing.
					2363	Boot and shoe cut stock and manufacturing.
					2364	Footwear (except rubber) manufacturing.
					2365	Leather gloves and mittens manufacturing.
					2366	Luggage manufacturing.

leather	317	2367	Handbags and other personal goods manufacturing.	
manufacturing,	319	2369	Other leather products	
			NEC.	
	237	2370	Fur goods manufacturing.	237

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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>La</i>
23	Apparel and other finished products made from fabrics, leather, and similar materials manufacturing	238	Miscellaneous apparel and accessories manufacturing.	2381	Dress and work gloves (except knit and all leather) manufacturing.	2381	
	Continued			2382	Robes and dressing gowns manufacturing.	2384	
outer	2385			2383	Raincoats and other waterproof garments manufacturing.		
				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	House furnishings (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.		
general.	2421	242	Sawmills and planing mills.	2421	Sawmills and planing mills,		
				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	Millwork.	2431
and 2433	manufacturing.	2432	Veneer and plywood manufacturing.	2432	Veneer and plywood manufacturing.	2432
		2433	Prefabricating wooden buildings structural members			
244	Wooden containers manufacturing.	2440	Wooden containers manufacturing.	244	Wooden containers manufacturing.	244
249	Other lumber and wood products (except furniture) manufacturing, NEC.	2491	Wood preserving.	2491	Wood preserving.	2491
		2499	Other lumber and wood products (except furniture) manufacturing, NEC.	2499	Other lumber and wood products (except furniture) manufacturing, NEC.	2499
25	Furniture and fixtures manufacturing.	251	Household furniture manufacturing.	2510	Household furniture	
	manufacturing.	251	ing.			
		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

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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>La Cl</i>
26	Paper and allied products manufacturing -- Continued	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) manufacturing.	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 manufacturing.	2647	
		2649	Other converted paper and paperboard 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 publishing allied industries.	271	Newspapers: publishing, publishing and printing.	2710	Newspapers: publishing, publishing and printing.
		272	Periodicals: publishing, publishing and printing.	2720	Periodicals: publishing, publishing and printing.
		273	Books: publishing, publishing and printing.	2730	Books: publishing, publishing and printing.
		274	Commercial printing.	2740	Commercial printing.
		275	Manifold business forms manufacturing.	2750	Manifold business forms manufacturing.
		276	Greeting card manufacturing.	2760	Greeting card manufacturing.
		277	Bookbinding and related industries manufacturing.	2771	Blankbooks, looseleaf binders, and devices manufacturing.
				2772	Bookbinding and miscellaneous related work manufacturing.
		278	Printing trade service industries.	2781	Typesetting.
				2782	Photoengraving.
				2783	Electrotyping and stereotyping.
				2789	Other printing trade service industries, NEC.
		279	Other printing and publishing, NEC.	2790	Other printing and publishing, NEC.
28	Chemicals and allied products manufacturing.	281	Industrial inorganic and organic chemicals manufacturing.	2810	Industrial inorganic and organic chemicals manufacturing.
		282	Plastics materials and synthetic resins, synthetic rubber, synthetic and other manmade fibers (except glass) manufacturing.	2820	Plastics materials and synthetic resins, synthetic rubber, synthetic and other manmade fibers (except glass) manufacturing.
		283	Drug manufacturing.	2831	Biological products manufacturing.
				2832	Medicinal chemicals and botanical products manufacturing.
				2833	Pharmaceutical preparations manufacturing.

			ufacturing.			
	284	Soap, detergents, and cleaning preparations, perfumes, cosmetics, and other toilet preparations manufacturing.	2841	Soap and detergents (except specialty cleaners) manufacturing.	2841	
			2842	Specialty cleaning, polishing, and sanitation preparations (except soap and detergents) manufacturing.	2842	
			2843	Surface active agents, finishing agents, sulfonated oils, and assistants manufacturing.	2843	
toilet	2844	C	2844	Perfumes, cosmetics, and other preparations manufacturing.		

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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>La Cl</i>
28	Chemicals and allied products manufacturing.	285	Paints, varnishes, lacquers, enamels, and allied products manufacturing.	2850	Paints, varnishes, lacquers, enamels, and allied products	285	
	Continued.		manufacturing.				
		286	Gum and wood chemicals manufacturing.	2860	Gum and wood chemicals		
manufac	286						
		287	Agricultural chemicals manufacturing.	2870	Agricultural chemicals	287	
		289	Other chemicals and allied products manufacturing, NEC.	2891	Glue and gelatin manufacturing.	2891	
				2892	Explosives manufacturing.	2892	
				2893	Printing ink manufacturing.	2893	
				2894	Carbon black manufacturing.	2895	
				2899	Other chemicals and allied products manufacturing, NEC.	2899	
29	Petroleum refining and related industries.	291	Petroleum refining.	2910	Petroleum refining.	291	
		292	Paving and roofing materials manufacturing.	2921	Paving mixtures and blocks manufacturing.	2951	
				2922	Asphalt felts and coatings manufacturing.	2952	
		299	Other petroleum refining and related industries, NEC.	2991	Lubricating oils and greases manufacturing.	2992	
				2999	Other petroleum and coal products manufacturing, NEC.	2999	
31	Rubber and miscellaneous plastic products manufacturing.	311	Tires and inner tubes manufacturing.	3110	Tires and inner tubes manufacturing.	301	
		312	Rubber footwear manufacturing.	3120	Rubber footwear manufacturing.	302	
		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
32	Stone, clay, and glass products manufacturing.	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.	
manu	3251			3242	Ceramic wall and floor tile manufacturing.	3253
				3243	Clay refractories manufacturing.	3255
manu	3259			3249	Other structural clay products manufacturing, NEC.	
		325	Pottery and related products manufacturing.	3251	Vitreous china plumbing fixtures, china, earthenware fittings, and bathroom accessories	3261
manufacturing.				3252	Vitreous china table and kitchen articles manufacturing.	3262
				3253	Fine earthenware (whiteware) table and kitchen articles	3263
manufacturing.				3254	Porecelain electrical supplies manufacturing.	3264
				3259	Other pottery and related products manufacturing, NEC.	3269

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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>La Ch</i>
32	Stone, clay, and glass products manufacturing	326	Concrete, gypsum, and plaster products manufacturing.	3261	Concrete brick and block manufacturing.	3271	
	Continued.			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.	
33	Primary metal industries, (ovens),	331	Blast furnaces, steel works, and the rolling and finishing of ferrous metals.	3311	Blast furnaces (including coke steel works, and the rolling of ferrous metals.
	3312			3312	Electrometallurgical products manufacturing.
				3313	Steel wire drawing and steel nails and spikes manufacturing.
				3314	Cold rolled sheet, strip, and bars manufacturing.
				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 wire.	
nonferrous	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	Ordinance and accessories.	3411	Guns, howitzers, mortars, and related equipment manufacturing.
				3412	Ammunition (except small arms) manufacturing and complete assembling of guided missiles and

			space vehicles.		
		3413	Tanks and tank components manu- facturing.	193	
		3414	Sighting and fire control		
equipment	194		manufacturing.		
		3415	Small arms manufacturing.	195	
		3416	Small arms ammunition manufac- turing.	196	
		3419	Other ordnance and accessories manufacturing, NEC.	199	

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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>La Cl</i>
34	Fabricated metal products manufacturing Continued.	342	Machinery (except electrical) manufacturing.	3421	Engines and turbines manufacturing.	351	
				3422	Farm machinery and equipment manufacturing.	352	
				3423	Construction, mining, and materials handling machinery and equipment manufacturing.	353	
				3424	Metalworking machinery and equipment manufacturing.		
equip	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
repairing.			3443	Ship and boat building and	
			3444	Railroad equipment	
manufacturing.	374		3445	Motoreycles, 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

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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>La</i>	<i>Ch</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	3570	Watches, clocks, clockwork	
387				
	ated devices, and parts manufacturing.		devices, and parts manufacturing.	
39	Miscellaneous manufacturing, NEC.	391	Jewelry, silverware, and plated ware manufacturing.	3911
		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 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) snuff manufacturing.	
213		3964	Tobacco stemming and redrying.	214
397	Motion picture production.	3970	Motion picture production.	7811

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>La Cl</i>
39	Miscellaneous manufacturing, NEC. Continued.	399	Other miscellaneous manufacturing, NEC.	3991	Brooms and brushes manufacturing.	3981	
				3992	Linoleum, asphalted felt base, and other hard surface floor cover manufacturing, NEC.	3982	
				3993	Matches manufacturing.	3983	
				3994	Lamp shades manufacturing.	3987	
				3995	Mortician's 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	
41	Railroad, rapid rail transit, and street railway transportation.	411	Railroad transportation.	4111	Railroad right of way (excluding switching and marshaling yards).		
				4112	Railroad switching and marshaling yards.		
				4113	Railroad terminals (passenger).		
				4114	Railroad terminals (freight).		
				4115	Railroad terminals (passenger and freight).		
				4116	Railroad equipment and maintenance.		
				4119	Other railroad transportation, NEC.		
		412	Rapid rail transit and street railway transportation.	4121	Rapid rail transit and street railway right of way. ²		
				4122	Rapid rail transit and street railway passenger terminals. ³		
				4123	Rapid rail transit and street railway equipment maintenance.		
				4129	Other rapid rail transit and street railway transportation, NEC.		
42	Motor vehicle transportation (intercity). ⁴	421	Bus transportation.	4211	Bus passenger terminals		
				4212	Bus passenger terminals (local). ⁴		
				4213	Bus passenger terminals (intercity and local). ⁴		
				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.

FOOTNOTES

¹The 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.

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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	La
42	Motor vehicle transportation--Continued	429	Other motor vehicle transportation, NEC.	4291	Taxicab transportation.	4121	
				4299	Other motor vehicle transportation, NEC.		
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. ⁵		
				4399	Other aircraft transportation, NEC.		
44	Marine craft transportation. ⁶	441	Marine terminals. ⁷	4411	Marine terminals (passenger). ⁸		
				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.	
45	Highway and street right of way.	451	Freeways.	4510	Freeways. ⁹
		452	Expressways.	4520	Expressways. ¹⁰
		453	Parkways.	4530	Parkways. ¹¹
		454	Arterial streets.	4540	Arterial streets. ¹²
		455	Collector/distributor streets.	4550	Collector/distributor streets. ¹³
		456	Local access streets.	4560	Local access streets. ¹⁴
		457	Alleys.	4570	Alleys. ¹⁵
		459	Other highway and street right of way, NEC.	4590	Other highway and street right of way, NEC.
46	Automobile parking.	460	Automobile parking.	4600	Automobile parking. ¹⁶
47	Communication.	471	Telephone communication.	4711	Telephone exchange stations.
	(microwave).			4712	Telephone relay towers
				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).
	television			4759	Other combined radio and communication, NEC.
		479	Other communication, NEC.	4790	Other communication, NEC.

LEVELS—Continued

Code	Category	Code	Category	Code	Category	SIC Reference ¹	La Cl
48	Utilities	481	Electric utility.	4811	Electric transmission right of way. ¹⁷		
		C		4812	Electric generation plants.		
				4813	Electricity regulating substations.		
				4819	Other electric utility, NEC.		
		482	Gas utility.	4821	Gas pipeline right of way. ¹⁷		
				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. ¹⁷		
				4832	Water treatment plants (purification).		
				4833	Water storage. ¹⁸		
				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 landfills.		
				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.		
49	Other transportation, communication, and utilities, NEC.	491	Other pipeline right of way and pressure control stations, NEC.	4911	Petroleum pipeline right of way. ¹⁷		
				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. ¹⁸		
				4929	Other transportation services and		

arrangements, NEC.

499 Other transportation, communication, and utilities, NEC. 4900 Other transportation, communication, and utilities, NEC.

FOOTNOTES

are identified only
¹The 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.
²Code 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 Docking facilities that rapid rail transit is considered to be railroad right of way and is coded are identified under 4111.
³Code 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).
⁴Codes 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).
⁵Code 4391 "Heliport landing/takeoff pads" when they are separate activities and not a part of and flying fields."
⁶Code 44 "Marine craft transportation." The repair of marine craft should be coded 3443, and repairing."
⁷Code 441 "Marine terminals" include all wharves, piers, and docks) and associated areas commercial passenger, freight, and fishing craft. primarily serve recreational type of marine craft
code 744, "Marinas,"
⁸Code 4411 "Marine terminals (passenger)"
⁹Code 4510 "Freeways" are divided with full control of access and no cross traffic at grade.
¹⁰Code 4520 "Expressways" are divided traffic with full or partial control of access with major crossroads.

Footnotes continued on following page.

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B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES — TWO-, THREE-, AND FOUR-DIGIT

LEVELS — Continued

¹¹Code 4530 "Parkways" are highways for noncommercial traffic, (17 parking spaces), and that serves no other single type of activity. This code includes parking on open lots, with full or partial control of access. They are located within a park parking within parking structures, parking within structures that also house other activities (e.g., or within a ribbon of parklike development. parking area in an office building), and the
¹²Code 4540 "Arterial streets" are those streets which serve movements of traffic and are not freeways, expressways, and parkways. centers. Parking areas of less than 5,000 square feet are not identified
Generally there is no control of access. as a separate activity.
¹³Code 4550 "Collector/distributor streets" are those streets that collect traffic from the local streets and channel it into the arterial where the *surface is devoted exclusively to the right-of-way* of the respec-

system. These streets also provide necessary cross connections between arterials. The collector/distributor street does not handle long impounded surface water through trips, and it is not continuous for any great length. or other natural water

¹⁴Code 4560 "Local access streets" are those used primarily for "Water areas." access to residences, businesses, or other abutting activities. services" include the ticket

¹⁵Code 4570 "Alleys" are minor narrow streets usually without sidewalks and on which building adjoin from the rear. distinct activity, not

¹⁶Code 4600 "Automobile parking" includes nonresidential off terminals. street parking that is 5,000 square feet or greater (or approximately

tive activities and is used for no other

¹⁸Code 4833 "Water storage" includes areas or water tanks used for storage. Lakes formations are identified under code 93,

¹⁹Code 4924 "Transportation ticket offices of any of the transportation systems. identified only when they are a separate and located within one of the transportation

Code	Category	Code	Category	Code	Category	SIC Reference [†]	La Ch
51	Wholesale trade:	511	Motor vehicles and automotive equipment - wholesale.	5111	Automobiles and other motor vehicles - wholesale.	5012	
				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	Meats 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.		
				5152	Grain - wholesale.		

Incl. 5051	5153 Hides, skins, and raw furs whole sale.		
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.		
	516 Electrical goods wholesale.	5161 Electrical apparatus and equipment, wiring supplies, and construction materials wholesale.	5063
and 5064		5162 Electrical appliances, television, radio sets wholesale.	
		5163 Electronic parts and equipment wholesale.	5065
	517 Hardware, plumbing, heating equipment, and supplies wholesale.	5171 Hardware wholesale.	5072
		5172 Plumbing and heating equipment and supplies wholesale.	5074
equip 5077	B	5173 Air conditioning, refrigerated ment, and supplies wholesale.	

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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>La Ch</i>
51	Wholesale trade 2	518	Machinery, equipment, and supplies wholesale.	5181	Commercial and industrial machinery, equipment, and supplies wholesale.		
machin 5082	B						
	Continued						
					5182 Farm machinery and equipment wholesale.	5083	
					5183 Professional equipment and supplies wholesale.	5086	
					5184 Equipment and supplies for service establishments wholesale.	5087	
					5185 Transportation equipment and supplies (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	5091	

				leum products and scrap) whole sale.		
			5192	Petroleum bulk stations and terminals 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 home furnishings wholesale.		5097
			5198	Lumber and construction materials		
5098				wholesale.		
			5199	Other wholesale trade, NEC.		5099
52	Retail trade building materials, hardware, and farm equipment.	521	Lumber and other building materials retail.	5211	Lumber yards retail	5211
				5212	Building materials retail.	5212
		522	Heating and plumbing equipment 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 equipment retail.	5251	Hardware retail	5251
				5252	Farm equipment retail.	5252
53	Retail trade general merchandise.	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 operators 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 merchandise 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> [†]	<i>La</i>
54	Retail trade -- food	543	Fruits and vegetables -- retail.	5430	Fruits and vegetables -- retail.	543	
	Continued	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. ³	5462	
				5462	Bakeries (nonmanufacturing) -- retail. ⁴	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) -- 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, home furnishings, and equipment.	571	Furniture, home furnishings, and equipment—retail.	5712
5714		5711	Furniture—retail.	5713
		5712	Floor coverings—retail.	5714
		5713	Draperies, curtains, and upholstery—retail.	5715
		5714	China, glassware, and metalware—retail.	5719
		5719	Other furniture, home furnishings, and equipment retail, NEC.	572
572	Household appliances—retail.	5720	Household appliances—retail.	5732
573	Radios, televisions, and music supplies—retail.	5731	Radios and televisions—retail.	5733
		5732	Music supplies—retail.	5812
58	Retail trade—eating and drinking.	581	Eating places.	5812
		5810	Eating places.	5820
		582	Drinking places (alcoholic beverages).	5820
		5820	Drinking places (alcoholic beverages).	5813
		5813	B	
			erages).	

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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
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—	
5996			retail.	
		5995	Gifts, novelties, and souvenirs—re-	5997
			tail.	
		5996	Optical goods—retail.	5998
		5999	Other retail trade, NEC.	5999
61	Finance, insurance, and	611	Banking and bank related func-	6111
	real estate services.		tions.	
				601, 602, 603,
				and 604
		6112	Bank related functions.	605
		612	Credit services (other than	6121
			banks).	
		6122	Agricultural, business, and personal	612
			credit services (including credit	613, 614 and 615
			unions).	
		6129	Other credit services (other than	611 and 616
			banks), NEC.	
		613	Security and commodity brok-	6131
			ers, dealers, exchanges, and	
			services.	6211
		6132	Commodity contracts brokers and	6221
			dealers services.	
		6133	Security and commodity exchanges.	623
		6134	Security and commodity allied serv-	628
			ices.	
		614	Insurance carriers, agents, brok-	6141
			ers, and services.	
				63
		6142	Insurance agents, brokers, and serv-	64
			ices.	

FOOTNOTES

paints and var-

nishes who has a definite storage area set aside for

his merchandise.

¹The SIC codes are listed for purposes of reference. They are the

include only those

codes in the SIC system that most nearly correspond to the 4 digit

the products sold.

land use activity indicated. (See ch. 111, sec. A3, "The Use of Standard

retail" include only

Industrial Classification Nomenclature.") A dash indicates that there

products that

is no corresponding SIC code.

²Code 51 "Wholesale trade." A code of "0" is used in the auxiliary

establishments serving

position for those wholesalers who maintain a definite storage area on

alcoholic beverages.

the premises. For example, 5122 0 is a wholesaler of

nishes who has a definite storage area set aside for

his merchandise.

³Code 5461 "bakeries (manufacturing)—retail"

include only those

codes in the SIC system that most nearly correspond to the 4 digit

the products sold.

land use activity indicated. (See ch. 111, sec. A3, "The Use of Standard

retail" include only

Industrial Classification Nomenclature.") A dash indicates that there

products that

is no corresponding SIC code.

⁴Code 5462 "Bakeries (nonmanufacturing)—

retail" include only

those bakeries that do not produce on the premises the

products that

are sold.

⁵Code 5810 "Eating places" include both

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>La</i>	<i>Ch</i>
61	Finance, insurance, and real estate services	615	Real estate and related services.	6151	Real estate operators (except developers) and lessors.	651		
	Continued.			6152	Real estate agents, brokers, and management services.	653		
				6153	Title abstracting services.	654		
				6154	Real estate subdividing and			
					ing services.			
				6155	Real estate operative builders.	656		
				6156	Combinations of real estate, insurance, loan, and law services.	661		
				6159	Other real estate and related			
					services, NEC.			
		616	Holding and investment services.	6160	Holding and investment services.	67		
		619	Other finance, insurance, and real estate services, NEC.	6190	Other finance, insurance, and real estate services, NEC.			
62	Personal services.	621	Laundering, dry cleaning, and dyeing services.	6211	Laundering, dry cleaning, and dyeing services (except rugs).	7211, 7212, 7216		
				6212	Linen supply and industrial laundry services.	7213		
				6213	Diaper services.	7214		
				6214	Laundering and dry cleaning (self service).	7215		
				6215	Rug cleaning and repair services.	7217		
		622	Photographic services (including commercial).	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		
		629	Other personal services, NEC.	6290	Other personal services, NEC.	729		
63	Business services.	631	Advertising services.	6311	Advertising services (general).	7311		
				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
		633	Duplicating mailing and stenographic services.	6331	Direct mail advertising services.	7331
serv	7332			6332	Blueprinting and photocopying	
					iee.	
				6339	Stenographic services and other duplicating and mailing services;	7339
					NEC.	
		634	Dwelling and other building services.	6341	Window cleaning services.	7341
serv	7342			6342	Disinfecting and exterminating	
					vices.	
				6349	Other dwelling and building	
services,	7349				NEC.	
		635	News syndicate services.	6350	News syndicate services.	735
		636	Employment services.	6360	Employment services.	736

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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	La
63	Business services	637	Warehousing and storage services. ²	6371	Farm products warehousing and storage (excluding stockyards).	4221	
	Continued			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	
consulting		7392		6392	Business and management		
					services.		
				6393	Detective and protective services.	7393	
				6394	Equipment rental and leasing serv	7394	

			ices.		
			6395 Photofinishing services.		7395
			6396 Trading stamp services.		7396
			6397 Automobile and truck rental serv		7511
			ices.		
			6398 Motion picture distribution and		7812 and 78
			services.		
			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	
re	Incl. 7541		pair and wash), NEC.		
		649	Other repair services, NEC.	6491 Electrical repair services (except	Incl. 7621
				radio and television):	
				6492 Radio and television repair services.	7622
				6493 Watch, clock, and jewelry repair	763
				services.	
				6494 Reupholstery and furniture repair	764
				services.	
				6495 Armature rewinding services.	7694
				6499 Other repair services, NEC.	7699
65	Professional services.	651	Medical and other health serv	6511 Physicians' services.	801, 803,
			ices.		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	8092
				home services.	
				6517 Medical clinics—out patient	
services.					
				6519 Other medical and health services,	8099
				NEC.	
		652	Legal services.	6520 Legal services.	811
		659	Other professional services,	6591 Engineering and architectural serv	891
			NEC.	ices.	
				6592 Educational and scientific research	892
				services.	
				6593 Accounting, auditing, and book	893
				keeping services.	
				6594 Urban planning services.	Incl. 899
				6599 Other professional services, NEC.	Incl. 899
66	Contract construction	661	General contract construction	6611 Building construction—general con	151
	services.		services.	tractor services.	
				6619 Other general construction contrac	16
				tor services, NEC.	

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>La Cl</i>
66	Contract construction services--Continued	662	Special construction trade services.	6621	Plumbing, heating, and air conditioning services.	171	
				6622	Painting, paper hanging, and decorating services.	172	
				6623	Electrical services.	173	
				6624	Masonry, stonework, tile setting, and plastering service.	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	Executive, legislative, and judicial functions. ³	Incl. 919, 929, and 939	
		672	Protective functions and their related activities.	6721	Police protection and related activities.	Incl. 919, 929, and 939	
				6722	Fire protection and related activities.	Incl. 919, 929, and 939	
				6723	Civil defense and related activities.	Incl. 919, 929, and 939	
		673	Postal services.	6730	Postal services.	Incl. 919	
		674	Correctional institutions.	6741	Prisons.	Incl. 919, 929, and 939	
				6749	Other correctional institutions, NEC.	Incl. 919, 929, and 939	
		675	Military bases and reservations. ⁴	6751	Military training bases.	Incl. 919 and 929	
				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	6811	Nursery schools.	Incl. 821	

	education.	6812	Primary (elementary) schools. ⁵	Incl. 821
		6813	Secondary schools. ⁶	Incl. 821
682	University, college, junior college, and professional school education.	6821	Universities and colleges.	Incl. 8221
		6822	Junior colleges.	Incl. 8222
		6823	Professional schools.	Incl. 8221
683	Special training and schooling.	6831	Vocational or trade schools.	8242
		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, Incl. 8299	A
			NEC.	

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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
69	Miscellaneous services.	691	Religious activities. ⁷	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

[†]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

legislature and courts. All operational activities (e.g., shipbuilding, schools, or hospitals) should be identified separately under the respective activity codes.

⁴Code 675 "Military bases and reservations"

is no corresponding SIC code. _____ tions used by both the active military as well as the Reserves and the _____ National Guard.
²Code 637 "Warehousing and storage services" include only those _____ ⁵Code 6812 "Primary (elementary) schools" may facilities that are used by or are open to the public. When ware _____ or may not include housing and storage is functionally and organizationally linked to _____ a kindergarten, but they do include grades 1 through 6. _____ another activity (e.g., a general contractor or an apparel manufacturer), _____ ⁶Code 6813 "Secondary schools" are schools that include grades 7 _____ the facilities are identified and coded the same as the parent activity _____ through 12, popularly known as junior and senior high schools. _____ and with a code of 4 (warehousing and storage) in the auxiliary position. _____ ⁷Code 691 "Religious activities" include only those places operated _____ for worship or for the promotion of religious activities. Activities _____ of men's, youths', and boys' suits, coats, and overcoats. _____ maintained by the religious organizations (e.g., schools, hospitals, pub- _____ lishing houses, etc.) should be identified separately under the respective _____ activity codes. ³Code 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 _____

71	Cultural activities and nature exhibitions.	711	Cultural activities.	7111	Libraries	823
				7112	Museums.	Incl. 841
				7113	Art galleries. ²	Incl. 841
				7119	Other cultural activities, NEC.	
		712	Nature exhibitions.	7121	Planetaria.	
				7122	Aquariums.	Incl. 842 ¹
				7123	Botanical gardens and arboretums.	Incl. 842
				7124	Zoos.	
				7129	Other nature exhibitions, NEC.	
		719	Other cultural activities and nature exhibitions, NEC.	7191	Historic and monument sites. ³	
				7199	Other cultural activities and nature exhibitions, NEC.	
72	Public assembly.	721	Entertainment assembly.	7211	Amphitheatres.	
				7212	Motion picture theaters.	Incl. 7831
				7213	Drive-in movies.	Incl. 7831
				7214	Legitimate theaters.	
				7219	Other entertainment assembly, NEC.	
		722	Sports assembly. ⁴	7221	Stadiums. ⁵	Incl. 7941
				7222	Arenas and field houses.	
				7223	Race tracks. ⁶	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.

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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>La</i>
73	Amusements—Continued	739	Other amusements, NEC.	7391	Penny arcades.	Incl. 7949	
				7392	Miniature golf.	Incl. 7949	
				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. ⁷		
				7422	Playgrounds. ⁸		
				7423	Playfields or athletic fields. ⁹		
				7424	Recreation centers (general). ¹⁰		
				7425	Gymnasiums and athletic clubs.	Incl. 7949	
				7429	Other playground and athletic areas, NEC.		
		743	Swimming areas.	7431	Swimming beaches. ¹¹		
				7432	Swimming pools. ¹²	7944	
		744	Marinas. ¹³	7441	Yachting clubs.	Incl. 7949	
				7442	Boat rentals and boat access sites.		
				7449	Other marinas, NEC.		
		749	Other recreation, NEC.	7491	Camping and picnicking areas. ¹⁴		
				7499	Other recreation, NEC.		
75	Resorts and group camps.	751	Resorts.	7511	General resorts. ¹⁵		
				7512	Dude ranches.	Incl. 7032	
				7513	Health resorts.	Incl. 8092	
				7514	Ski resorts.		
				7515	Hunting and fishing clubs. ¹⁸	Incl. 7032	
				7519	Other resorts, NEC.		
		752	Group or organized camps.	7520	Group or organized camps. ¹⁷	Incl. 7032	
76	Parks.	761	Parks—general recreation.	7610	Parks—general recreation. ¹⁸		

762	Parks—leisure and ornamental.	7620	Parks—leisure and ornamental.
769	Other parks, NEC.	7690	Other parks, NEC.
79	Other cultural, entertainment, and recreational activities, NEC.	790	Other cultural, entertainment, and recreational activities, NEC.
7900	Other cultural, entertainment, and recreational activities, NEC.		

FOOTNOTES

contain such facilities as sand boxes, slides, tecters, swings, climbing

¹The SIC codes are listed for purposes of reference. They are the coded only when found as a codes in the SIC system that most nearly correspond to the 4 digit serving another activity (e.g. land use activity indicated. (See ch. III. sec. A3, "The Use of Standard Industrial Classification Nomenclature,") A dash indicates that there have been developed for is no corresponding SIC code.

²Code 7113 "Art galleries" do not include those galleries that sell art objects commercially. Commercial sales are coded 5999, "Other retail trade, NEC."

³Code 7191 "Historic and monument sites" include those locations sports (e.g., baseball, foot set aside for no other purpose than to commemorate an historical event, may be provided. They activity, or person.

⁴Code 722 "Sports assembly" includes only the public assembly (e.g., a school) areas used for nonparticipating sports. (general)" include diversified

⁵Code 7221 "Stadiums" include those used for individual sports, for all ages and interests. e.g., baseball or football, as well as those used for several sports activities. not limited to a gymnasium, ties.

⁶Code 7223 "Race tracks" include those used for individual racing beach areas that have been activities, e.g., horse racing and automobile racing, as well as those used swimming. They are identified for several racing activities.

⁷Code 7421 "Play lots or tot lots" are small areas developed especially for preschool or elementary school aged children. They may

apparatus, etc. They are identified and separate activity and not subsidiary to or apartment house or playground).

⁸Code 7422 "Playgrounds" are areas that active play and recreation. They are found as a separate activity and not activity (e.g., a school).

⁹Code 7423 "Playfields or athletic fields;" well as a field(s) or court(s) for competitive ball, or tennis). Bleachers or grandstands are identified and coded only when found subsidiary to or serving another activity

¹⁰Code 7414 "Recreation centers (general)" include diversified recreation for a wide variety of activities The recreation centers may contain, but are social or play rooms, game rooms, arts and

¹¹Code 7431 "Swimming beaches" are set aside specifically for the purpose of only when they are not a part of a larger

¹²Code 7432 "Swimming Pools" are

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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 include areas on which

¹⁶Code 7515 "Hunting and fishing clubs"

Footnotes continued on following page:

code 11, "Household units"). They may be indoor or outdoor pools. 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.

¹³Code 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 repair," respectively. ¹⁷Code 7520 "Group or organized camps" include general camps for children, as well as Boy Scout and Girl Scout camps.

¹⁴Code 7491 "Camping and picnicking areas" are separately identified may include, but are not limited to, picnic areas, bathing beaches, playfields, hiking trails, camping grounds, and other manmade recreation facilities.

¹⁵Code 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. ¹⁹Code 7620 "Parks—leisure and recreational" 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 [†]	La Cl
81	Agriculture. ²	811	Farms (predominant crop, fibers). ³	8111	Farms (predominant crop, cotton).		
				8119	Farms (other type fiber crops).		
		812	Farms (predominant crop, cash grains). ³	8120	Farms (predominant crop, cash grains).		
		813	Farms (field crops other than fiber or cash grain crops). ³	8130	Farms (field crops other than fiber or cash grain crops).		
		814	Farms (predominant crop, fruits, tree nuts, or vegetables). ³	8141	Farms (predominant crop, fruits).		
				8142	Farms (predominant crop, tree nuts).		
				8143	Farms (predominant crop, vegetables).		
		815	Farms (predominantly dairy products). ³	8150	Farms (predominantly dairy products).		
		816	Farms and ranches (livestock other than dairy). ³	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). ³	8170	Farms (predominantly poultry).		

818	Farms (general no predomi- nance): ³	8180	Farms (general no predominance).
819	Other agriculture and related activities, NEC.	8191	Range and grassland pastures (not farm or ranch): ⁴
		8192	Horticultural specialties.
		8193	Apiary farms.
	Incl. 0193		
		8194	Farms and ranches (predomi- nantly horse raising):
	Incl. 0193	8199	Other agriculture and related activi- ties, NEC.
82	Agricultural related activi- ties.	821	Agricultural processing: ⁵
0712		8211	Cotton ginning and compressing.
0713		8212	Grist milling services.
0714	thresh	8213	Corn shelling, hay baling, and ing services.
0715		8214	Contract sorting, grading, and pack- aging services (fruits and vegeta- bles):
0719		8219	Other agricultural processing serv- ices, NEC.
		822	Animal husbandry services.
	Incl. 0722	8221	Veterinarian services.
		8222	Animal hospital services.
	Incl. 0722	8223	Poultry hatchery services.
0723		8229	Other animal husbandry services, NEC.
0729	C		

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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
82	Agricultural related activi- ties -- Continued	829	Other agricultural related activi- ties, NEC.	8291	Horticultural services.	0731	
				8299	Other agricultural related activities, NEC.		
83	Forestry activities and re- lated services: ⁶	831	Commercial forestry produc- tion: ⁷	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,	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.	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	Ferrous alloy 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
(including 142				8542	Crushed and broken stone riprap) quarrying.	
				8543	Sand and gravel quarrying.	144
				8544	Clay, ceramic, and refractory	
miner—145					als mining.	
				8545	Chemical and fertilizers (mineral) mining.	147
				8549	Other mining and quarrying of non-metallic minerals (except fuels),	148
NEC.						
	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.

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B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES -- TWO-, THREE-, AND FOUR-DIGIT

LEVELS -- Continued

FOOTNOTES

farm or ranch. These areas are usually part of the public domain in which grazing has been permitted.

¹The SIC codes are listed for purposes of reference. They are the includes only preliminary codes in the SIC system that most nearly correspond to the 4 digit land use activity indicated. (See ch. III, Se. A3, "The Use of Standard Industrial Classification Nomenclature.") A dash indicates that there is no corresponding SIC code. ⁵Code 821 "Agricultural processing" processing of agricultural products. Any canning, or manufacturing is coded 21, manufacturing."

²Code 81 "Agriculture." A parcel of land is considered to be in primary use of the land. It is agricultural use if 10 or more acres are under cultivation, in tree or recreation or the grazing of live-bush crops, or are used for livestock or poultry purposes. The 10 acres forested areas. However, stock may also be taking place within these these types of activities are considered 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. ⁷Code 831 "Commercial forestry" forested areas not on the farms or ranches have been set aside to grow tree crops for "industrial wood" or to obtain tree products such as sap, bark, or seeds. Using the "Farm use" categories in app. 2 of this report, farm (i.e., "Industrial wood" includes commercial roundwood products, such as saw logs and pulpwood, but excludes fuel wood and fence posts. 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 "Forest reserves," i.e., areas withdrawn from any commercial use of the farm area) excluding the areas used by farm residences and associated buildings, nonresident farm buildings, areas in feed crops, and grazed "Parks," e.g., national or State parks, are also a type of forest reserve, but because of their designation for and nongrazed forested areas. Exceptions to this rule are: recreational activity, they should

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. 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)." 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

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, of shellfish, or the gathering of seaweed, the farm is identified as "Farms and ranches (livestock, other than preliminary processing, e.g., salting, packing, canning, or manufacturing dairy)," code 816. However, any extensive processing, 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

d. If the percentage of dairy, livestock, and poultry products, each came to less than 50 percent of the value of the farm products sold in the previous years, and if there are 3 or more "Farm uses" (predominantly fishing vessels)." 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, 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. These categories also include those areas of raw materials (e.g., washing, crushing, screening, etc.) are taking place if these processes are an integral part

⁴Code 8191 "Range and grass land pastures (not form or ranch)" include grasslands used for grazing purposes that are not a part of a

Code	Category	Code	Category	Code	Category	SIC Reference [†]	La Cl
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): ²		
92	Noncommercial forest development.	921	Forest reserves: ³	9211	Forest reserves (wilderness areas).		
				9212	Forest reserves (wildlife refuges).		
				9219	Other forest reserves, NEC.		
		922	Nonreserve forests (undeveloped).	9220	Nonreserve forests (undeveloped): ⁴		
93	Water areas.	931	Rivers, streams, or creeks.	9310	Rivers, streams, or creeks.		
		932	Lakes.	9320	Lakes: ⁵		

933	Bays or lagoons.	9330	Bays or lagoons.
934	Oceans and seas.	9340	Oceans and seas.
939	Other water areas, NEC.	9390	Other water areas, NEC.
94	Vacant floor area.	940	Vacant floor area.
940	Vacant floor area.	9400	Vacant floor area.
95	Under construction.	951	Under construction (residential).
951	Under construction (residential).	9510	Under construction (residential). ⁶
952	Under construction (nonresidential).	9520	Under construction (nonresidential). ⁷
99	Other undeveloped land and water areas, NEC.	990	Other undeveloped land and water areas, NEC.
990	Other undeveloped land and water areas, NEC.	9900	Other undeveloped land and water areas, NEC.

See footnotes on following page. B-24

B. A STANDARD SYSTEM FOR IDENTIFYING AND CODING LAND USE ACTIVITIES — TWO-, THREE-, AND FOUR-DIGIT

LEVELS — Continued

FOOTNOTES

(undeveloped)” are major forested

¹The 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, Se. A3, “The Use of Standard Industrial Classification Nomenclature.”) A dash indicates that there is no corresponding SIC code.

²Code 9100 “Undeveloped and unused land area (excluding noncommercial 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 surface water areas used that once were farms, as well as vacant parcels where structures have been demolished. Vacant nonresidential buildings are coded 9400, “Vacant floor area.”

³Code 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).

⁴Code 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 nature and not coded. Activities such as mining camping areas (code 7491), and logging camps within these forested areas should be separately identified.

⁵Code 9320 “Lakes” include permanent lakes with a minimum size of 1 acre. Impounded for storage should be identified as “Water storage,” code 4833.

⁶Code 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

⁷Code 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.

⁴Code 9220 “Nonreserve forests

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 nature and not coded. Activities such as mining

camping areas (code 7491), and logging camps within these forested areas should be separately identified.

⁵Code 9320 “Lakes” include permanent lakes with a minimum size of 1 acre. Impounded for storage should be identified as “Water storage,” code 4833.

⁶Code 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

⁷Code 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.

35 IAC 901 Appendix B: Land-Based Classification Standards

<i>LBCS</i>		<i>Description</i>	<i>35 IAC 901 Land Class</i>
<i>Main Category</i>	<i>Function Code</i>		
<i>Residence or accommodation functions</i>	1000	Residence or accommodation functions	A
	1100	Private household	
	1200	Housing services for the elderly	↑
	1210	Retirement housing services	
	1220	Congregate living services	
	1230	Assisted-living services	
	1240	Life care or continuing care services	
	1250	Skilled-nursing services	
	1300	Hotels, motels, or other accommodation services	
	1310	Bed and breakfast inn	
	1320	Rooming and boarding	↓
	1330	Hotel, motel, or tourist court	
	1340	Casino hotel	A
<i>General sales or services</i>	2000	General sales or services	
	2100	Retail sales or service	B
	2110	Automobile sales or service establishment	↑
	2111	Car dealer	
	2112	Bus, truck, mobile homes, or large vehicles	
	2113	Bicycle, motorcycle, ATV, etc.	
	2114	Boat or marine craft dealer	
	2115	Parts, accessories, or tires	
	2116	Gasoline service	
	2120	Heavy consumer goods sales or service	
	2121	Furniture or home furnishings	
	2122	Hardware, home centers, etc.	
	2123	Lawn and garden supplies	
	2124	Department store, warehouse club or superstore	
	2125	Electronics and Appliances	
	2126	Lumber yard and building materials	
2127	Heating and plumbing equipment		
2130	Durable consumer goods sales and service		
2131	Computer and software		
2132	Camera and photographic supplies		

2133	Clothing, jewelry, luggage, shoes, etc.	
2134	Sporting goods, toy and hobby, and musical instruments	
2135	Books, magazines, music, stationery	
2140	Consumer goods, other	
2141	Florist	
2142	Art dealers, supplies, sales and service	
2143	Tobacco or tobacconist establishment	
2144	Mail order or direct selling establishment	
2145	Antique shops, flea markets, etc.	
2150	Grocery, food, beverage, dairy, etc.	
2151	Grocery store, supermarket, or bakery	
2152	Convenience store	
2153	Specialty food store	
2154	Fruit and vegetable store	
2155	Beer, wine, and liquor store	
2160	Health and personal care	
2161	Pharmacy or drug store	
2162	Cosmetic and beauty supplies	
2163	Optical	
2200	Finance and Insurance	
2210	Bank, credit union, or savings institution	
2220	Credit and finance establishment	
2230	Investment banking, securities, and brokerages	
2240	Insurance-related establishment	
2250	Fund, trust, or other financial establishment	
2300	Real estate, and rental and leasing	
2310	Real estate services	
2320	Property management services	
2321	Commercial property-related	
2322	Rental housing-related	
2330	Rental and leasing	
2331	Cars	
2332	Leasing trucks, trailers, RVs, etc.	
2333	Recreational goods rental	
2334	Leasing commercial, industrial machinery, and equipment	↓
2335	Consumer goods rental	
2336	Intellectual property rental (video, music, software, etc.)	B
2400	Business, professional, scientific, and technical services	
2410	Professional services	A
2411	Legal services	
2412	Accounting, tax, bookkeeping, payroll services	↑
2413	Architectural, engineering, and related services	
2414	Graphic, industrial, interior design services	

	2415	Consulting services (management, environmental, etc.)	
	2416	Research and development services (scientific, etc.)	
	2417	Advertising, media, and photography services	
	2418	Veterinary services	
	2420	Administrative services	
	2421	Office and administrative services	
	2422	Facilities support services	
	2423	Employment agency	
	2424	Business support services	
	2425	Collection agency	
	2430	Travel arrangement and reservation services	
	2440	Investigation and security services	
	2450	Services to buildings and dwellings	
	2451	Extermination and pest control	
	2452	Janitorial	
	2453	Landscaping	↓
	2454	Carpet and upholstery cleaning	
	2455	Packing, crating, and convention and trade show services	A
	2500	Food services	B
	2510	Full-service restaurant	
	2520	Cafeteria or limited service restaurant	↑
	2530	Snack or nonalcoholic bar	
	2540	Bar or drinking place	
	2550	Mobile food services	
	2560	Caterer	
	2570	Food service contractor	
	2580	Vending machine operator	
	2600	Personal services	
	2700	Pet and animal sales or service (except veterinary)	↓
	2710	Pet or pet supply store	
	2720	Animal and pet services	B
<i>Manufacturing and wholesale trade</i>	3000	Manufacturing and wholesale trade	
	3100	Food, textiles, and related products	C
	3110	Food and beverages	
	3120	Tobacco manufacturing establishment	↑
	3130	Textiles	
	3140	Leather and allied products	
	3200	Wood, paper, and printing products	
3210	Wood products establishment		
3220	Paper and printing materials		
3230	Furniture and related products		

	3300	Chemicals, and metals, machinery, and electronics manufacturing	↓	
	3310	Petroleum and coal products		
	3320	Chemicals, plastics, and rubber products		
	3330	Nonmetallic mineral products		
	3340	Primary metal manufacturing		
	3350	Machinery manufacturing		
	3360	Electrical equipment, appliance, and components manufacturing		
	3370	Transportation equipment, automobiles, etc.		
	3400	Miscellaneous manufacturing		
	3410	Jewelry and silverware		
	3420	Dolls, toys, games, and musical instruments		
	3430	Office supplies, inks, etc.		
	3440	Signs		C
	3500	Wholesale trade establishment		B
	3510	Durable goods		↑
	3520	Nondurable goods		↓
3600	Warehouse and storage services	B		
<i>Transportation, communication, information, and utilities</i>	4000	Transportation, communication, information, and utilities		
	4100	Transportation services		
	4110	Air transportation	U	
	4111	Air passenger transportation		
	4112	Air freight transportation	↑	
	4113	Airport and support establishment	↓	
	4114	Aircraft and accessories		
	4115	Other air transportation (including scenic, balloon, etc.)	U	
	4120	Rail transportation	C	
	4121	Rail passenger transportation		
	4122	Rail freight transportation	↑	
	4123	Rail transportation support establishment		
	4130	Road, ground passenger, and transit transportation		
	4131	Local transit systems--mixed mode		
	4132	Local transit systems--commuter rail		
	4133	Local transit systems--bus, special needs, and other motor vehicles		
	4134	Interurban, charter bus, and other similar establishments		
	4135	School and employee bus transportation		
	4136	Special purpose transit transportation (including scenic, sightseeing, etc.)		
	4137	Taxi and limousine service		
4138	Towing and other road and ground services			
4140	Truck and freight transportation services			

4141	General freight trucking, local	
4142	General freight trucking, long-distance	
4143	Freight trucking, specialized (used household and office goods)	
4144	Freight trucking, specialized (except used goods)	
4150	Marine and water transportation	
4151	Marine passenger transportation	
4152	Marine freight transportation	
4153	Marine port and harbor operations	
4154	Marine cargo handling and dry dock services	
4155	Marine navigational and other services	
4160	Courier and messenger services	↓
4170	Postal services	
4180	Pipeline transportation	C
4200	Communications and information	
4210	Publishing	C
4211	Newspapers, books, periodicals, etc.	↕
4212	Software publisher	C
4220	Motion pictures and sound recording	B
4221	Motion Picture and video production, publishing, and distribution	↑
4222	Motion picture viewing and exhibition services	
4223	Sound recording, production, publishing, and distribution	
4230	Telecommunications and broadcasting	
4231	Radio and television broadcasting	
4232	Cable networks and distribution	
4233	Wireless telecommunications	
4234	Telephone and other wired telecommunications	
4240	Information services and data processing industries	
4241	Online information services	↓
4242	Libraries and archives	
4243	News syndicate	B
4300	Utilities and utility services	C
4310	Electric power	↑
4311	Hydroelectric	
4312	Fossil	
4313	Nuclear	
4314	Alternative energy sources	
4320	Natural gas, petroleum, fuels, etc.	
4330	Water, steam, air conditioning supply	
4331	Drinking water	
4332	Irrigation and industrial water supply	
4333	Air conditioning and steam supply	

	4340	Sewer, solid waste, and related services	
	4341	Hazardous waste collection	
	4342	Hazardous waste treatment and disposal	
	4343	Solid waste collection	
	4344	Solid waste combustor or incinerator	
	4345	Solid waste landfill	
	4346	Waste treatment and disposal	↓
	4347	Septic tank and related services	
			C
<i>Arts, entertainment, and recreation</i>	5000	Arts, entertainment, and recreation	
	5100	Performing arts or supporting establishment	B
	5110	Theater, dance, or music establishment	
	5120	Sports team or club	↑
	5130	Racetrack establishment	↓
	5140	Promoter of performing arts, sports, and similar events	↓
	5150	Agent for management services	
	5160	Independent artist, writer, or performer	B
	5200	Museums and other special purpose recreational institutions	A
	5210	Museum	↑
	5220	Historical or archeological institution	↓
	5230	Zoos, botanical gardens, arboreta, etc.	A
	5300	Amusement, sports, or recreation establishment	B
	5310	Amusement or theme park establishment	
	5320	Games arcade establishment	↑
	5330	Casino or gambling establishment	
	5340	Miniature golf establishment	
	5350	Skiing	↓
	5360	Marina or yachting club facility operators	
	5370	Fitness, recreational sports, gym, or athletic club,	
5380	Bowling, billiards, pool, etc.	↓	
5390	Skating rinks, roller skates, etc.		
	5400	Camps, camping, and related establishments	B
	5500	Natural and other recreational parks	A
<i>Education, public admin., health care, and other inst.</i>	6000	Education, public admin., health care, and other inst.	
	6100	Educational services	A
	6110	Nursery and preschool	
	6120	Grade schools	↑
	6121	Elementary	
	6122	Middle	
	6123	Senior	
	6124	Continuance	
	6125	Alternate education services	
	6126	Adult education services	

6130	Colleges and Universities	—
6140	Technical, trade, and other specialty schools	—
6141	Beauty schools	—
6142	Business management	—
6143	Computer training	↓
6144	Driving education	—
6145	Fine and performing arts education	A
6146	Flight training	U
6147	Sports and recreation education	B
6200	Public administration	B
6210	Legislative and executive functions	↑
6220	Judicial functions	↓
6221	Courts	B
6222	Correctional institutions	A
6300	Other government functions	B
6310	Military and national security	—
6320	Space research and technology	↑
6400	Public Safety	—
6410	Fire and rescue	↓
6420	Police	—
6430	Emergency response	B
6500	Health and human services	A
6510	Ambulatory or outpatient care services	—
6511	Clinics	↑
6512	Family planning and outpatient care centers	—
6513	Medical and diagnostic laboratories	—
6514	Blood and organ banks	↓
6520	Nursing, supervision, and other rehabilitative services	—
6530	Hospital	A
6560	Social assistance, welfare, and charitable services	B
6561	Child and youth services	—
6562	Child day care	↑
6563	Community food services	—
6564	Emergency and relief services	↓
6565	Other family services	—
6566	Services for elderly and disabled	—
6567	Veterans affairs	B
6568	Vocational rehabilitation	A
6600	Religious institutions	A
6700	Death care services	B
6710	Funeral homes and services	—
6720	Cremation services and cemeteries	↑
6800	Associations, nonprofit organizations, etc.	—
6810	Labor and political organizations	—

	6820	Business associations and professional membership organizations	↓
	6830	Civic, social, and fraternal organizations	B
<i>Construction-related businesses</i>	7000	Construction-related businesses	
	7100	Building, developing, and general contracting	B
	7110	Residential construction	
	7120	Land development and subdivision	↑
	7130	Industrial, commercial and institutional building construction	
	7200	Machinery related	
	7310	Building equipment and machinery installation contractors	
	7320	Excavation contractor	
	7330	Water well drilling contractor	
	7340	Wrecking and demolition establishment	
	7350	Structural steel erection contractor	
	7360	Special trade contractor	
	7370	Carpentry, floor, and tile contractor	
	7380	Concrete contractor	
	7310	Electrical contractor	
	7320	Glass and glazing contractor	
	7330	Masonry and drywall contractors	
	7340	Painting and wall covering	↓
	7350	Plumbing, heating, and air-conditioning	
	7360	Roofing, siding, and sheet metal contractors	B
7400	Heavy construction	C	
7410	Highway and street construction;		
7420	Bridge and tunnel construction	↑	
7430	Water, sewer, and pipeline construction	↓	
7440	Power lines, communication and transmission lines		
7450	Industrial and other nonbuilding construction	C	
<i>Mining and extraction establishments</i>	8000	Mining and extraction establishments	C
	8100	Oil and natural gas	
	8200	Metals (iron, copper, etc.)	↑
	8300	Coal	↓
	8400	Nonmetallic mining	
	8500	Quarrying and stone cutting establishment	C
<i>Agriculture, forestry, fishing and</i>	9000	Agriculture, forestry, fishing and hunting	C
	9100	Crop production	
	9110	Grain and oilseed	↑
	9111	Wheat	
	9112	Corn	
	9113	Rice	

9114	Soybean and oilseed	
9115	Dry pea and bean	
9120	Vegetable farming or growing services	
9130	Fruits and trees	
9140	Greenhouse, nursery, and floriculture	
9141	Food crops grown under cover	
9142	Nursery and tree production	
9143	Floriculture production	
9150	All other crops	
9151	Tobacco crop	
9152	Cotton crop	
9153	Sugarcane crop	
9154	Hay	
9155	Peanut crop	
9200	Support functions for agriculture	
9210	Farm and farm labor management services	
9220	Spraying, dusting, and other related services	
9230	Crop harvesting and post harvest crop activities (including drying, siloing, etc.)	
9240	Cotton ginning, grist milling, etc.	
9300	Animal production including slaughter	
9310	Cattle ranch and crops	
9311	Beef cattle ranch establishments	
9312	Cattle feedlot establishment	
9320	Dairy cattle and milk production	
9330	Hog and pig farm	
9340	Poultry and egg production and hatcheries	
9350	Sheep and goat farming establishments	
9360	Fish hatcheries, fisheries, and aquaculture	
9370	All other animal production	
9371	Apiculture (bees, wax, and related operations)	
9372	Horse and equine production	
9373	Fur-bearing animal production	
9380	Support functions for animal production	
9400	Forestry and Logging	
9410	Logging	
9420	Forest nurseries	
9430	Support functions for forestry	
9500	Fishing, hunting and trapping, game preserves	
9510	Fishing	↓
9520	Hunting and trapping, game retreats, game and fishing preserves	C
9900	Unclassifiable function	U

9910	Not applicable to this dimension	↑
9990	To be determined	↓
9999	To be determined	U

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE H: NOISE
CHAPTER II: ENVIRONMENTAL PROTECTION AGENCY

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

Section

910.100	General
910.101	Personnel Qualifications Repeal
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910.103	Definitions
910.104	Measurement Techniques for 35 Ill. Adm. Code 900
910.105	Measurement Techniques for 35 Ill. Adm. Code 901
910.106	<u>Protocols for Determination of Sound Levels</u>
910.107	<u>Measurement Techniques for Highly-Impulsive Sound</u>

AUTHORITY: Implementing and authorized by Sections 25 and 27 of the Environmental Protection Act (Ill. Rev. Stat., 1981, ch. 111 1/2, pars. ~~1025 and 1027~~ 415 ILCS 5/25 and 27) and ~~35 Ill. Adm. Code 900.103.~~

SOURCE: Adopted at _____ 8 Ill. Reg. Effective_____.

Section 910.100 General

This ~~report, part pursuant to 35 Ill. Adm. Code 900.103(a) and (b), (old Rules 103(a) and 103(b), Chapter 8, of the Noise Pollution Control Regulations)~~ establishes: ~~the qualifications necessary for the Illinois Environmental Protection Agency (Agency) personnel to conduct sound pressure level measurements, the definitions necessary to supplement this report,~~ specifies the instrumentation to be used by Agency personnel when conducting sound pressure level measurements and the specific sound pressure level measurement techniques to be employed by Agency personnel conducting sound pressure level acoustical noise measurements and sets forth the specific acoustical measurement techniques to be employed by personnel when conducting time- averaged sound level (L_{eq}) measurements. ~~The personnel qualifications, instrumentation requirements and measurement techniques as more specifically set forth in this Part , shall must~~

apply to Agency personnel in determining whether a noise source is in compliance with 35 Ill. Adm. Code 900 and 901, but do not establish limits on sound.

Section 951.101 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.

Section 910.102 Instrumentation

a) Sound Measuring Equipment

- 1) ~~A~~ An integrating sound level meter used alone or used in conjunction with an octave band or one-third octave band filter set or a real time sound analyze (octave band or one-third octave band) shall must conform with the following standards incorporated by reference at 35 Ill. Adm. Code 900.106 or subsequent revisions:
 - A) ~~American National Standards Institute~~ ANSI §1.4 – 197183 (R2001) “American National Standard Specification for Sound Level Meters, Type 1 Precision Sound Level Meter.
 - B) ~~American National Standards Institute~~ ANSI §§1.11 - 19686 (R 1998) “American National Standard Specifications for Octave Band Filter Sets, Class II; One Half Octave Band Filter Sets, Class III; and Fractional-Octave-Band Analog and Digital filters.”
 - C) ~~American National Standards Institute~~ ANSI §§1.6 – 196784 (R2001) “American National Standard Preferred Frequencies, Frequency Levels, and Band Numbers for Acoustical Measurements.”
 - D) ~~American National Standards Institute~~ ANSI §§1.8 - 19689 “American National Standard Reference Quantities for Acoustical Levels.”
 - E) International Electrotechnical Commission, IEC 804-2000 1985 Integrating/averaging Sound level meters.
- 2) A magnetic tape recorder, graphic level recorder or other indicating device is used, ~~shall~~ must meet the requirements of the Society of Automotive Engineers (SAE) Recommended Practice J184 “Qualifying a Sound Data Acquisition System.” November 1998, incorporated by reference at Section 900.106

- 3) The laboratory calibration of instrumentation used for acoustic measurement must be traceable to the National Bureau of Standards, and must be performed no less than once every 12 months.
- 4) For outdoor measurement a windscreen ~~shall~~ must be attached to the microphone

b) Weather Measuring Equipment

- 1) An anemometer and compass or other devices must be used to measure wind speed and direction in accordance with the manufacturer's recommended procedures.
 - 2) A thermometer, designed to measure ambient temperature, must be used in accordance with the manufacturer's recommended procedures.
 - 3) A hygrometer, must be used in accordance with the manufacturer's recommended procedures to measure the relative humidity.
 - 4) A barometer, must be used in accordance with the manufacturer's recommended procedures to measure the barometric pressure.
- h) ~~For outdoor measurements a suitable windscreen shall be attached to the microphone.~~

Section 910.103 **Definitions**

The definitions contained in 35 Ill. And. Code 900.101 shall will apply to this part

~~"Angle of incidence": the orientation of the microphone relative to the sound source. See Appendix A.~~

~~"Ambient": the all encompassing sound associated with a given environment without the noise source of interest.~~

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

~~(Agency Note: A discrete tone differs by definition from a prominent discrete tone.)~~

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

~~"Impulsive sound": sound characterized by brief excursions of sound pressure (acoustical impulses) above the ambient whose duration is less than one second.~~

~~(Agency Note: Examples of impulsive sound sources are a drop forge hammer and explosive blasting.)~~

~~"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.~~

~~"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.~~

~~"Nonsteady sound": a sound whose sound pressure level shifts significantly during the period of observation. Meter variations are greater than ± 3 dB using the "slow" meter characteristic.~~

~~"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.~~

~~"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 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.~~

~~(Agency Note: 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.)~~

~~"Quasi-steady sound": a train of two or more acoustical impulses.~~

~~(Agency Note: Examples of quasi-steady sound are riveting and a pneumatic hammer.)~~

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

~~"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."~~

~~(Agency Note: The sound level may be obtained by the use of a metering characteristic and the weightings A, B, C (or other).)~~

~~"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 microneutons per square meter.~~

~~"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 ± 3 dB using the "slow" meter characteristic.~~

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

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

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

- a) Site Selection
 - 1) Measurements may be taken at one or more microphone positions within the appropriate receiving land. Measurement instruments ~~shall~~ must be set up outdoors within the boundaries of the receiving land for the purpose of determining whether a noise source is in compliance with Part 901.
 - 2) Measurement instruments ~~shall~~ must be set up not less than 25 feet (7.6 meters (m)) from the property-line-noise-source. The 25-foot (7.6 m) set back requirement is from the noise source and not the property line unless the noise source is contiguous to the property line.
 - 3) Other measurement locations may be used for investigatory purposes such as, but not limited to, the following:
 - A) Determining the extent of noise pollution caused by the source of sound;
 - B) Determining the ambient; and
 - C) Analyzing those acoustical parameters that describe the sound source
 - 4) For measurements of sound sources with no audible discrete tones, microphones should not be set up less than 25 feet (7.6 m) from any reflective surface which may affect data. If measurements must be taken within 25 feet (7.6 m), the effect, if any, of the reflective surface on the measured data must be determined.
 - 5) For measurements of sound sources with audible discrete tones microphones should not be set up less than 50 feet (15.2 m) from any reflective surface which may affect data. If measurements must be taken

within 50 feet (15.2 m), the effect, if any, of the reflective surface on the measured data must be determined.

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

b) Instrumentation Set Up

- 1) A tripod ~~shall~~ must be set ~~over~~ at the chosen site. The tripod shall be extended to a height between 3 feet 8 inches (1.12 m) and 4 feet 10 inches (1.47 m) above ground.
- 2) A microphone ~~shall~~ must be attached to the appropriate end of a 5-foot (1.5 m) or longer cable and ~~shall~~ must be affixed to the top of the tripod. The other end of the cable shall be connected to the measuring instrument
- 3) The angle of incidence of the microphone shall must be adjusted to that which will yield the flattest frequency response in accordance with the manufactures specifications.
- 4) 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.

c) ~~Data Acquisition and~~ Measurement Site Operation and Instrument Calibration

- 1) Before taking sound pressure level measurements, measure and record (near the measurement site):
 - A) Wind speed and direction;
 - B) Ambient temperature;
 - C) Relative humidity; and
 - D) Barometric pressure.
- 2) Turn the measuring instrument on and allow the instrument to stabilize. Monitor and record the battery condition of the calibrator and all measuring instruments.
- 3) Turn the calibrator on at its appropriate frequency. Allow the calibrator to stabilize and calibrate the measuring system according to the manufacturer's specifications. After the measuring system has been

calibrated, remove the calibrator and attach a ~~suitable~~ windscreen to the microphone.

- 4) Adjust the microphone to the angle of incidence that will yield the ~~flattest~~ frequency response in accordance with the manufacturer's specifications.
- 5) Measure the sound pressure level data within the limitations of subsection (d) and according to the manufacturer's recommended procedures. Other sound pressure levels may be used for investigatory purposes such as, but not limited to, the following:
 - A) Determining the extent of noise pollution caused by the source of sound;
 - B) Determining the ambient; and
 - C) Analyzing those acoustical parameters that describe the sound source.
- 6) While sound measurements are being taken, the operator must be separated from the microphone so as to minimize any influence on the measurements.
- 7) While measurements are being taken, visual and aural surveillance of extraneous sound sources and varying wind conditions ~~should~~ must be made to insure that the conditions of measurement are accurately known. Record any variations in these parameters that may affect data. The number and basis for each ~~bad or corrupted~~ affected data block ~~shall~~ must be recorded. When using a tape recorder, voice commentary concerning conditions ~~shall~~ will be recorded on the cue track.
- 8) To minimize wind effects on the microphone, sound measurements ~~shall~~ must not be taken when the wind velocity is greater than 12 miles per hour (5.4 m/second) at the microphone position.
- 9) For the purposes of data correction, the ambient sound at the measurement site must be determined by means of measurement or analysis.
- 10) After taking sound pressure level measurements, remove the windscreen and attach the calibrator to the microphone. Turn the calibrator on at its appropriate frequency. After allowing the calibrator to stabilize, monitor and record the measuring system response. When the measuring system response varies by more than ± 0.5 dB from the most recent field calibration, the sound pressure level measurements obtained since such most recent field calibration shall not be used for enforcement purposes.

- 11) 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~~ must be recorded.
 - 12) At the end of the sound survey, monitor and record the battery condition of the calibrator and all measuring instruments. Near the measurement site, measure and record:
 - A) Windspeed and direction;
 - B) Ambient temperature;
 - C) Relative humidity; and
 - D) Barometric pressure.
 - 13) Record the physical and topographical description of the ground surface within the vicinity of the measurement site, survey site location, a description of the sound source, a diagram of the area, the location of reflective surfaces near the microphone, and the approximate location of the noise source relative to the microphone position.
 - 14) ~~Use of~~ A magnetic tape recorder is used to preserve the raw data is encouraged. Calibration signals shall must be recorded at the beginning and end of each tape as well as at intermediate times such as when relocating to a new measurement site occurs. Voice commentary concerning local conditions and bad or corrupted-affected data blocks shall must be recorded on the cue track. The original tape recording shall must be preserved for subsequent evaluation. Laboratory analyses may be performed on magnetic tape recorded field data. A description of the laboratory instrumentation and procedures shall must be recorded. Analyses used in the laboratory shall must be correlated to field measurement techniques.
- d) Limiting Procedures for Specific Types of Data Acquisition
- 1) For measurements of non-impulsive sound with audible discrete tones, one-third octave band sound pressure levels ~~shall~~ must be obtained in determining whether a noise source is in compliance with 35 Ill. Adm. Code 901.106 ~~of the Noise Regulations~~.
 - 2) For measurements of non-impulsive sound with no audible discrete tones, octave band sound pressure levels ~~shall~~ must be obtained in determining

whether a noise source is in compliance with 35 Ill. Adm. Code 901.102 and 901.103 of the Noise Regulations.

3) ~~Steady sound:~~

- A) ~~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 Appendix C, Figure 1).~~
- B) ~~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 Appendix C, Figure 2).~~
- C) ~~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.~~

4) ~~Fluctuating Sound:~~

- A) ~~For measurements of fluctuating sound at one or more octave or one third octave bands where the fluctuations on the indicating meter are between ± 3 dB and ± 5 dB ("slow" meter characteristic), obtain the sound pressure level 3 dB below the maximum level. This corresponds to the root mean square (rms) sound pressure level and shall be obtained for such octave or one third octave bands (See Appendix C, Figure 3). 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.~~
- B) ~~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 ± 5 dB, the sound pressure level may deviate from the true rms value by several decibels (See Appendix D, Figure 1). 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:~~

$$L = 10 \log \frac{1}{N} \sum_{i=1} L_i / 10$$

where

N = the total number of observations

L_i = the maximum level at each observation

- C) ~~For measurements of fluctuating sound that varies between two or more levels when observed using the "slow" meter characteristic, the measurement methods specified in subsection (d)(4)(A) or (D)(4)(B), may be used to obtain sound pressure levels for the fluctuating level of interest (See Appendix D, Figure 2).~~
- 5) ~~Intermittent Sound: For measurements of intermittent sound the methods specified in subsections (d)(1), (d)(2), (d)(3) or (d)(4) shall be used during the time the sound exceeds the ambient level (See Appendix D, Figure 3).~~
- 6) ~~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 Appendix E, Figure 1).~~
- 7) ~~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 Appendix E, Figure 2).~~
- e) Correction Factors

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

- a) The raw data collection procedures for the determination of equivalent sound level (L_{eq}) are described in this section using as an example the determination of a 1-hour equivalent sound level (L_{eq}) corrected for background ambient. The following procedures shall must be used:

1) Using small blocks:

- A) The 1-hour interval is divided into many small blocks of time such that corruption of the data from short-term background transient sound and loss of data can be limited to the corrupted or bad blocks. The block duration in seconds, shall must remain fixed for any measurement hour. The duration shall must be neither less than 10 seconds nor greater than 100 seconds. For example, if the block duration is chosen to be 60 seconds (1 minute), then the data collection proceeds for 60, 1-minute periods of measurement.
- B) The collected data shall must be the block duration L_{eq} (or sound exposure level (SEL)) in octave bands (or 1/3-octave bands if prominent discrete tones may be present).
- C) Data for any block corrupted by one or more short-term background transient sounds shall must be deleted.
- D) After deleting corrupted data blocks, there will be a fixed number of “good” data blocks remaining. This number is designated as N_{PLNS} , where PLNS stands for Property-Line-Noise-Source. These remaining “good” blocks shall must be numbered consecutively. The subscript i is used to denote the numbering of the blocks in time order after corrupted data blocks have been deleted.
- E) The data for the N_{PLNS} remaining blocks are averaged on an energy basis by octave (or 1/3-octave band) using Equation 1 below. In this equation, two subscripts are used, i to designate time and j to designate the specific frequency, either an octave band or 1/3 octave band. The raw 1-hour L_{eq} . The raw, 1-hour L_{eq} in the j th frequency band is give by:

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

where L_{eqij} is the L_{eq} in the j th frequency band for the i th non-deleted data block.

- F) In terms of SEL, the raw SEL in the j th frequency band is given by:

$$SEL_j = 10 \log \left(\sum_{i=1}^{N_{PLNS}} 10^{\left(\frac{SEL_{ij}}{10} \right)} \right) \quad \text{[Equation 2]}$$

where SEL_{ij} is the SEL in the j th frequency band for the i th non-deleted data block.

- G) The raw, 1-hour L_{eq} in the j th frequency band is given in terms of the corresponding SEL_j by:

$$L_{eqj} = SEL_j + 10 \log \left(\frac{3600}{N_{PLNS} \Delta T} \right) \quad \text{[Equation 3]}$$

Where T is the block duration in seconds, N_{PLNS} is the number of non-discarded data blocks, and 3600 is the number of seconds in an hour.

2) Continuous Data Collection.

- A) The measuring instrument shall must be adjusted to continuously measure and accumulate L_{eq} for each block of time. For convenience, the hour may be split into several smaller blocks such as 10, 6-minute blocks or 4, 15-minute blocks, etc.
- B) A switch on the measuring instrument shall must be available to inhibit data collection whenever a short-term background transient sound occurs. This switch shall be used to prevent short-term background ambient sounds from corrupting the data.
- C) Data collection shall must proceed for one hour. The energy average of the several measured L_{eqij} each weighted by the number of seconds actually accumulated during the i th block results in the raw, 1-hour L_{eq} in each frequency band given by:

$$L_{eqj} = 10 \log \left(\frac{1}{T_{PLNS}} \sum_{i=1}^{N_{PLNS}} T_i 10^{\left(\frac{L_{eqij}}{10} \right)} \right) \quad \text{[Equation 4]}$$

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

$$T_{PLNS} = \sum_{i=1}^{N_{PLNS}} T_i \quad \text{[Equation 5]}$$

3) Minimum data collection requirements:

- A) Initial Measurement Duration. The property-line-noise-source measurements shall must proceed initially for one hour. Because of correction for short-term background transient sounds, actual reported data collection time T, in seconds, may be less than 3600 (one hour).
- i) If small blocks of data are used for data collection, then the total measurement duration in seconds, T_{PLNS} is given by $N_{PLNS} T$, where T is the length of each block in seconds and N_{PLNS} is the number of non-discarded blocks. If data inhibition is used for data collection, then T_{PLNS} is the number of non-inhibited seconds during the measurement hour. In either case, T_{PLNS} shall be no less than 900 seconds.
 - ii) If very few blocks were used for data collection, then the duration of each block, T, may be too long and should be reduced.
 - iii) For either data collection method, sounds considered to be short-term transient may actually be part of the long-term background ambient and should be so redefined.
- B) Extended Measurement Duration. If T_{PLNS} is less than 900 seconds during the first hour of measurements, the raw data collection procedures shall be appropriately modified and new measurements shall must proceed for an additional hour. If T_{PLNS} after combining the first and the second hour of measurements is also less than 900 seconds, then the raw data collection shall must continue using the data inhibition method or method employed during the second hour until T_{PLNS} is greater than or equal to 900 seconds.

4) Correction for Long-Term Background Ambient Sound:

- A) The raw, 1-hour L_{eq} shall must be corrected for long-term background ambient sound. Subsection (a) (4) (5) below describes methods to obtain the long-term background ambient sound level in the jth frequency band. The correction is dependent on the

difference (in decibels) between the raw, 1-hour, jth band property-line-noise-source L_{eqj} and corresponding jth band long-term background ambient sound level. The correction to be applied is as follows:

- i. If the difference between the raw 1-hour L_{eq} and the long-term background ambient sound is larger than 10 decibels, then the correction shall be set to 0.
- ii. If the difference between the raw 1-hour L_{eq} and the long-term background ambient sound difference is less than 3 decibels, then the jth frequency-band level, L_{eqj} , shall be set equal to 0.
- iii. If the difference between the raw 1-hour L_{eq} and the long-term background ambient sound is between 3 and 10 decibels then the correction given in Table 1 below shall be subtracted from the raw, 1-hour property-line-noise-source L_{eqj}

Table 1
Corrections in dB for long-term
Background ambient sound

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

- B) The long-term background ambient corrected level shall must be the property-line-noise-source L_{eqj} reported for the jth frequency band.
- b) Obtaining the background ambient sound level:
- 1) The background ambient shall must be measured for the purposes of this section during a 10-minute interval.

- 2) Long-term background ambient measurement procedures are similar to procedures to measure the property-line-noise-source itself. Eliminating short-term background ambient transient sounds from the measurement of average long-term background ambient sound proceeds in a manner similar to the measurement of the property-line-noise-source emissions themselves. The two methods for measurement are: (1) to divide the 10-minute measurement into short blocks of data, or (2) inhibit data collection when short-term background transient sounds occur. The same method shall be used for gathering both the long-term background ambient data. The measurement procedures for each method are given in subsections (b) (3), (b) (4) and (b) (5) below:
- 3) Using small blocks of data
- A) The 10-minute measurement of long-term background ambient shall be divided into short measurement blocks. The duration of these blocks shall remain constant during the entire measurement, both when measuring the long-term background ambient and when measuring the property-line-noise-source. The duration of this measurement block in seconds, T , shall divide exactly (without remainder) into 600 and shall be higher neither greater than 100 seconds nor less than 10 seconds.
- B) All data for any measurement block corrupted by one or more short-term ambient transient sounds shall be discarded. The number of remaining, non-discarded measurement blocks is designated N_{BA} , where BA stands for background ambient.
- C) The L_{eq} for each octave (or 1/3 – octave) band are (energy) averaged over the N_{BA} remaining measurement blocks to obtain average long-term background ambient L_{eq} per band. Equation 1 (see subsection (a) (1) (E) above) is used for this calculation with N_{BA} replacing N_{PLNS} as the number of elemental blocks to be summed. The total duration of the measurement in seconds, T_{BA} , is given by N_{BA} multiplied by T .
- 4) Continuous Data Collection.
- A) The measuring instrument shall be adjusted according to manufacturer's instructions to continuously measure and accumulate (i.e record) L_{eq} . A switch shall be available to inhibit data collection whenever a short-term background transient sound occurs, (and on some instruments, a button may be available to delete the most recent, previous data).

- B) The switches or buttons shall must be used to prevent short-term background ambient sounds from corrupting the data.
 - C) Data collection shall must proceed for 10 minutes. The result is the 10-minute, long-term background ambient L_{eq} in each band.
 - D) T_{BA} is the number of non-inhibited measurement seconds during the 10-minute measurement period.
- 5) The minimum duration, for either method, T_{BA} shall must be no less than 150 seconds. If T_{BA} is less than 150 seconds, then the measurement of the long-term background ambient shall must continue beyond the original 10 minutes and until T_{BA} for the total long-term background ambient measurement is greater than or equal to 150 seconds.
- 6) Measurement Alternatives. The long-term background ambient-noise should ideally be measured at the potential violation site just before measurement of the property-line-noise-source emissions. However, turning off the property-line-noise-source may not always be possible. The following are a hierarchical order of five procedures for obtaining the long-term background ambient noise. The first four procedures involves direct measurement; the fifth procedure provides for use of tables of values obtained from extensive measurements. These are not equivalent procedures but are ordered from what shall be is -considered to be the most accurate to what shall is considered to be the least accurate procedure.
- A) Direct Measurement Procedure –1: With the property-line-noise-source (PLNS) turned off measure the long-term background ambient noise within the hour before or within the hour after measurement of the PLNS emissions at the location where the PLNS measurements are being taken and with the measurement equipment used for the PLNS measurements.
 - B) Direct Measurement Procedure-2: With the PLNS turned off, measure the long-term background ambient during a similar time period in terms of background ambient sound level, within one (1) to twenty-four (24) hours before, or within one (1) to twenty four (24) hours after measurement of the PLNS emissions at the location where the PLNS measurements are being taken and with the measurement equipment used for the PLNS.
 - C) Direct Measurement Procedure- 3: With the PLNS turned off, measure the long-term background ambient during some other acoustically similar period within one (1) to thirty (30) days before, or within one (1) to thirty (30) days after measurement of the PLNS emissions. This alternate long-term background ambient

measurement time might be a Saturday night or anytime during a Sunday or holiday. The measurements would be made at the location where the PLNS measurements are being taken and with the measurement equipment (or like equipment) used for the PLNS measurement.

- D) Direct Measurement Procedure-4: With the PLNS turned off, measure the long-term background ambient noise during some other acoustically similar period within thirty (30) to ninety (90) days before, or within thirty (30) to ninety (90) days after measurement of the PLNS emissions. These measurements would be made at the location where the PLNS measurements are being taken and with the measurement equipment (or like equipment) used for the property-line-noise-source measurements.
- E) Tables of long-term background Ambient Noise. Where none of the alternatives can be used, use the applicable long-term background ambient data taken from Tables 2 through 5. These tables are organized by predominant land use and time of day (daytime or nighttime). There are separate tables for octave and 1/3- octave bands. The background environments presented in the table are based on extensive measurements conducted in the Chicago area and are divided into the five categories given below in accordance with Bonvallet, G.L., "Levels and Spectra of Traffic of Traffic, Industrial, and Residential Area Noise," *Jornal of the Acoustical Society of America*, 23 (4), pp 435-439, July, 1951; and Dwight E. Bishop and Paul D. Schomer, *Handbook of Acoustical Measurements and Noise Control*, Chapter 50, community Noise Measurements, 3rd Edition, Cyril M Harris, Editor , McGraw-Hill Book Co., New York (1991).
- i) Category 1: Noisy commercial and Industrial Areas. Very heavy traffic conditions such as (a) in busy downtown commercial areas, (b) at intersections of mass transportation and other vehicles including L trains, heavy motor trucks and other heavy traffic, and (c) street corners where many motor vehicles, buses and heavy trucks accelerate.
- ii) Category 2: Moderate Commercial and Industrial Areas, and Noisy Residential Areas. Heavy traffic areas with (a) conditions similar to (1) above but with somewhat less traffic, (b) routes of relatively heavy or fast automobile traffic but where heavy truck traffic is not extremely dense, and (c) motor bus routes.

- iii) Category 3: Quiet Commercial and Industrial Areas, and Moderate Residential Areas. Light traffic conditions where no mass transportation vehicles and relatively few automobiles and trucks pass, and where these vehicles generally are travel at low speeds. Residential areas and commercial streets and intersections with little traffic comprise this category.
- iv) Category 4: Quiet Residential Areas. These areas are similar to Category 3 above but for this group the background is either is distant traffic or is unidentifiable.
- v) Category 5: Very Quiet, Sparse Suburban or Rural Areas. These areas are similar to Category 4 above but are usually in unincorporated areas and for this group there are few if any near neighbors.

Table 2. Daytime long-term background ambient L_{eq} levels by land use categories and 1/3 octave-band level.

<u>Band Center H%</u>	<u>Background Category</u>				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
<u>20</u>	<u>63</u>	<u>56</u>	<u>48</u>	<u>42</u>	<u>36</u>
<u>25</u>	<u>64</u>	<u>57</u>	<u>49</u>	<u>43</u>	<u>37</u>
<u>31</u>	<u>65</u>	<u>58</u>	<u>50</u>	<u>44</u>	<u>38</u>
<u>40</u>	<u>65</u>	<u>58</u>	<u>51</u>	<u>44</u>	<u>38</u>
<u>50</u>	<u>66</u>	<u>59</u>	<u>51</u>	<u>45</u>	<u>39</u>
<u>63</u>	<u>66</u>	<u>59</u>	<u>52</u>	<u>46</u>	<u>40</u>
<u>80</u>	<u>67</u>	<u>60</u>	<u>52</u>	<u>46</u>	<u>40</u>
<u>100</u>	<u>68</u>	<u>60</u>	<u>53</u>	<u>47</u>	<u>41</u>
<u>125</u>	<u>67</u>	<u>59</u>	<u>52</u>	<u>46</u>	<u>40</u>
<u>160</u>	<u>66</u>	<u>59</u>	<u>52</u>	<u>46</u>	<u>40</u>
<u>200</u>	<u>66</u>	<u>58</u>	<u>51</u>	<u>45</u>	<u>39</u>
<u>250</u>	<u>65</u>	<u>58</u>	<u>50</u>	<u>44</u>	<u>38</u>
<u>315</u>	<u>64</u>	<u>57</u>	<u>49</u>	<u>43</u>	<u>37</u>
<u>400</u>	<u>63</u>	<u>55</u>	<u>48</u>	<u>42</u>	<u>36</u>
<u>500</u>	<u>62</u>	<u>54</u>	<u>46</u>	<u>40</u>	<u>34</u>
<u>630</u>	<u>61</u>	<u>53</u>	<u>44</u>	<u>38</u>	<u>32</u>
<u>800</u>	<u>60</u>	<u>51</u>	<u>42</u>	<u>36</u>	<u>30</u>
<u>1000</u>	<u>58</u>	<u>49</u>	<u>40</u>	<u>34</u>	<u>28</u>
<u>1250</u>	<u>56</u>	<u>47</u>	<u>38</u>	<u>32</u>	<u>26</u>

<u>1600</u>	<u>54</u>	<u>45</u>	<u>36</u>	<u>30</u>	<u>24</u>
<u>2000</u>	<u>52</u>	<u>43</u>	<u>33</u>	<u>28</u>	<u>21</u>
<u>2500</u>	<u>50</u>	<u>41</u>	<u>30</u>	<u>25</u>	<u>19</u>
<u>3150</u>	<u>49</u>	<u>39</u>	<u>28</u>	<u>23</u>	<u>17</u>
<u>4000</u>	<u>48</u>	<u>37</u>	<u>25</u>	<u>20</u>	<u>15</u>
<u>5000</u>	<u>46</u>	<u>35</u>	<u>23</u>	<u>18</u>	<u>13</u>
<u>6300</u>	<u>44</u>	<u>33</u>	<u>21</u>	<u>16</u>	<u>10</u>
<u>8000</u>	<u>43</u>	<u>31</u>	<u>19</u>	<u>14</u>	<u>8</u>
<u>10,000</u>	<u>41</u>	<u>29</u>	<u>17</u>	<u>12</u>	<u>6</u>
<u>12,500</u>	<u>39</u>	<u>27</u>	<u>15</u>	<u>10</u>	<u>4</u>

Table 3. Nighttime long-term background ambient L_{eq} levels by land use categories and 1/3-octave band level.

<u>Band Center H%</u>	<u>Background Category</u>				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
<u>20</u>	<u>53</u>	<u>48</u>	<u>43</u>	<u>37</u>	<u>31</u>
<u>25</u>	<u>54</u>	<u>49</u>	<u>44</u>	<u>38</u>	<u>32</u>
<u>31</u>	<u>55</u>	<u>50</u>	<u>45</u>	<u>39</u>	<u>33</u>
<u>40</u>	<u>55</u>	<u>50</u>	<u>46</u>	<u>39</u>	<u>33</u>
<u>50</u>	<u>56</u>	<u>51</u>	<u>46</u>	<u>40</u>	<u>34</u>
<u>63</u>	<u>56</u>	<u>51</u>	<u>47</u>	<u>41</u>	<u>35</u>
<u>80</u>	<u>57</u>	<u>52</u>	<u>47</u>	<u>41</u>	<u>35</u>
<u>100</u>	<u>58</u>	<u>52</u>	<u>48</u>	<u>42</u>	<u>36</u>
<u>125</u>	<u>57</u>	<u>51</u>	<u>47</u>	<u>41</u>	<u>35</u>
<u>160</u>	<u>56</u>	<u>51</u>	<u>47</u>	<u>41</u>	<u>35</u>
<u>200</u>	<u>56</u>	<u>50</u>	<u>46</u>	<u>40</u>	<u>34</u>
<u>250</u>	<u>55</u>	<u>50</u>	<u>45</u>	<u>39</u>	<u>33</u>
<u>315</u>	<u>54</u>	<u>49</u>	<u>44</u>	<u>38</u>	<u>32</u>
<u>400</u>	<u>53</u>	<u>47</u>	<u>43</u>	<u>37</u>	<u>31</u>
<u>500</u>	<u>52</u>	<u>46</u>	<u>41</u>	<u>35</u>	<u>29</u>
<u>630</u>	<u>51</u>	<u>45</u>	<u>39</u>	<u>33</u>	<u>27</u>
<u>800</u>	<u>50</u>	<u>43</u>	<u>37</u>	<u>31</u>	<u>25</u>
<u>1000</u>	<u>48</u>	<u>41</u>	<u>35</u>	<u>29</u>	<u>23</u>
<u>1250</u>	<u>46</u>	<u>39</u>	<u>33</u>	<u>27</u>	<u>21</u>
<u>1600</u>	<u>44</u>	<u>37</u>	<u>31</u>	<u>25</u>	<u>19</u>

<u>2000</u>	<u>42</u>	<u>35</u>	<u>28</u>	<u>23</u>	<u>16</u>
<u>2500</u>	<u>40</u>	<u>33</u>	<u>25</u>	<u>20</u>	<u>14</u>
<u>3150</u>	<u>39</u>	<u>31</u>	<u>23</u>	<u>18</u>	<u>12</u>
<u>4000</u>	<u>38</u>	<u>29</u>	<u>20</u>	<u>15</u>	<u>10</u>
<u>5000</u>	<u>36</u>	<u>27</u>	<u>18</u>	<u>13</u>	<u>8</u>
<u>6300</u>	<u>34</u>	<u>25</u>	<u>16</u>	<u>11</u>	<u>5</u>
<u>8000</u>	<u>33</u>	<u>23</u>	<u>14</u>	<u>9</u>	<u>3</u>
<u>10,000</u>	<u>31</u>	<u>21</u>	<u>12</u>	<u>7</u>	<u>1</u>
<u>12,500</u>	<u>29</u>	<u>19</u>	<u>10</u>	<u>2</u>	

Table 4. Daytime long-term background ambient L_{eq} levels by land use categories and octave band level.

<u>Band Center H%</u>	<u>Background Category</u>				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
<u>31</u>	<u>70</u>	<u>63</u>	<u>55</u>	<u>49</u>	<u>43</u>
<u>63</u>	<u>71</u>	<u>64</u>	<u>57</u>	<u>51</u>	<u>45</u>
<u>125</u>	<u>72</u>	<u>64</u>	<u>57</u>	<u>51</u>	<u>45</u>
<u>250</u>	<u>70</u>	<u>63</u>	<u>55</u>	<u>49</u>	<u>43</u>
<u>500</u>	<u>67</u>	<u>59</u>	<u>51</u>	<u>45</u>	<u>39</u>
<u>1000</u>	<u>63</u>	<u>54</u>	<u>45</u>	<u>39</u>	<u>33</u>
<u>2000</u>	<u>57</u>	<u>48</u>	<u>38</u>	<u>33</u>	<u>26</u>
<u>4000</u>	<u>53</u>	<u>42</u>	<u>30</u>	<u>25</u>	<u>20</u>
<u>8000</u>	<u>48</u>	<u>36</u>	<u>24</u>	<u>19</u>	<u>13</u>

Table 5. Nighttime long-term background ambient L_{eq} levels by land use categories and octave band level.

<u>Band Center H%</u>	<u>Background Category</u>				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
<u>31</u>	<u>60</u>	<u>55</u>	<u>50</u>	<u>44</u>	<u>38</u>
<u>63</u>	<u>61</u>	<u>56</u>	<u>52</u>	<u>46</u>	<u>40</u>
<u>125</u>	<u>62</u>	<u>56</u>	<u>52</u>	<u>46</u>	<u>40</u>
<u>250</u>	<u>60</u>	<u>55</u>	<u>50</u>	<u>44</u>	<u>38</u>
<u>500</u>	<u>57</u>	<u>51</u>	<u>46</u>	<u>40</u>	<u>34</u>
<u>1000</u>	<u>53</u>	<u>46</u>	<u>40</u>	<u>34</u>	<u>28</u>
<u>2000</u>	<u>47</u>	<u>40</u>	<u>33</u>	<u>28</u>	<u>21</u>
<u>4000</u>	<u>43</u>	<u>34</u>	<u>25</u>	<u>20</u>	<u>15</u>
<u>8000</u>	<u>38</u>	<u>28</u>	<u>19</u>	<u>14</u>	<u>8</u>

APPENDIX F
OLD RULE NUMBERS REFERENCED

The following table is provided to aid in referencing old Agency rule numbers to section numbers pursuant to codification.

<u>Old</u>	<u>Ill. Adm. Code Part 910</u>
<u>Part 1.0</u>	<u>Section 910.100</u>
<u>Part 2.0</u>	<u>Section 910.101</u>
<u>Part 3.0</u>	<u>Section 910.102</u>
<u>Part 4.0</u>	<u>Section 910.103</u>
<u>Part 5.0</u>	<u>Section 910.104</u>
<u>Part 6.0</u>	<u>Section 910.105</u>
<u>Figure 1</u>	<u>Appendix A</u>
<u>Figure 2</u>	<u>Appendix B</u>
<u>Figure 3</u>	<u>Appendix C</u>
<u>Figure 4</u>	<u>Appendix D</u>
<u>Figure 5</u>	<u>Appendix E</u>

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

- a) Measurement of highly-impulsive sound under Rule 901.104 can be made in two distinct and equally valid ways, namely the general method and the controlled test method.
- b) General Method: The general method is to measure the 1-hour, A-weighted L_{eq} (not the octave or 1/3 octave band levels) using essentially one of the two procedures described in 35 Ill. Adm. Code 910.105 and 910.106.
 - 1) The procedure using small blocks of time to collect data is as follows:
 - A) The hour must be divided into small blocks and the A-weighted L_{eq} must be measured for each of these small blocks of time. L_{eq} must be measured for the entire hour but data collection must be inhibited whenever a short-term background transient sound occurs.
 - B) The duration of each block must be held constant during the hour. This duration in seconds must divide exactly into 900 and must be neither greater than 100 seconds nor less than 10 seconds.
 - C) The data for any block corrupted by one or more short-term background ambient sounds must be discarded.
 - 2) The continuous data collection procedures is as follows:
 - A) L_{eq} must be measured for the entire hour.

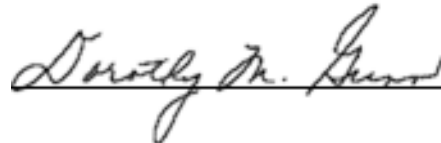
- B) Data collection must be inhibited whenever a short-term background transient sound occurs.
- 3) Correction for the Long-Term Background Ambient must be accomplished using all of the other procedures and requirements enumerated in 35 Ill. Adm. Code 910.105 and 910.106 must be complied with ~~in order~~ to determine an A-weighted, 1-hour, background-ambient-correct L_{eq} for the highly impulsive property-line-noise-source under study.
- c) Controlled Test Method: For this method, the following procedures must be used:
- 1) General Measurement Description
- A) The sound exposure per impulse from each separate individual impulsive source is measured.
- B) The total sound exposure per hour from each source is the sound exposure per event multiplied by the number of events per hour.
- C) The grand total sound exposure (SE) per hours is the sum of the sound exposures per hour from each of the separate individual sources.
- D) The reported SEL is obtained from the grand total sound exposure (SE) per hour using the following:
- $$SEL = 10 \log (SE) + 94. \quad [Eq. 7]$$
- E) The equivalent level, L_{eq} corresponding to a SEL measured or predicted for one hour (3600 seconds) is given by:
- $$L_{eq} = SEL - 10 \log (3600). \quad [Eq. 8]$$
- 2) Determination of Sound Exposure per Event must be as follows:
- A) The sound exposure per event from each, separate, individual source must be determined by measuring the total A-weighted sound exposure for about 10 repetitions of this source. This set of about 10 measurements may be performed continuously over a short period of time, or this set of measurements may be performed over a discontinuous set of measurement periods. In either case, the total measurement duration must be less than 100 seconds.
- B) These separate, individual property-line-noise-source controlled measurement must be free of any short-term ambient sounds. If

any short-term background transient sounds occur during these measurements, then the measurement must be repeated until measurement data, free of any corrupting short-term background ambient sounds are obtained.

- C) The total measured A-weighted sound exposure for this group of about 10 repetitions must be corrected for long-term background ambient by subtracting the A-weighted long-term background ambient sound exposure. The sound exposure value subtracted must be the long-term A-weighted background ambient sound exposure per second multiplied by the number of seconds used to measure the several source repetitions.
- D) The reported source A-weight sound exposure per event must be the total corrected sound exposure divided by the number of source repetitions measured.
- E) The background ambient must be measured for a short time, at least 30 seconds as near in time to the source measurements as possible, but within ½ hour. The total A-weighted long-term background ambient sound exposure per second is the total measured long-term background ambient sound exposure divided by the number of seconds of background ambient measurement.
- F) There must be no short-term background ambient sounds present during the measurement of the long-term background ambient. If any short-term background transient sounds occur during these measurements, then the measurements must be repeated until long-term background ambient measurement data free of any corrupting short-term background ambient sound are obtained.

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above order on February 20, 2003, by a vote of 7-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board