

CHAPTER 7010
MINNESOTA POLLUTION CONTROL AGENCY
AIR QUALITY DIVISION
NOISE POLLUTION CONTROL

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7010.0100 DEFINITIONS.

For the purpose of all noise pollution control rules:

A. "ANSI" means the American National Standards Institute or its successor bodies.

B. "Agency" means the Minnesota Pollution Control Agency, its agent, or representative.

C. "dBA" is a unit of sound level. "dBA" is the weighted sound pressure level by the use of the A metering characteristic and weighting as specified in ANSI Specification for Sound Level Meters, S1.4 - 1971, which is hereby incorporated by reference. For the purpose of these parts, dBA is used as a measure of human response to sound.

D. "Daytime hours" are those from 7:00 a.m. to 10:00 p.m. (0700-2200).

E. "Decibel" is a unit of sound pressure level, abbreviated dB.

F. "Director" means the executive director of the Minnesota Pollution Control Agency.

G. "Impulsive noise" means either a single sound pressure peak (with either a rise time less than 200 milliseconds or total duration less than 200 milliseconds) or multiple sound pressure peaks (with either rise times less than 200 milliseconds or total duration less than 200 milliseconds) spaced at least by 200 millisecond pauses.

H. "L₁₀" is the sound level, expressed in dBA, which is exceeded ten percent of the time for a one hour survey, as measured by test procedures approved by the director.

I. "L₅₀" is the sound level, expressed in dBA, which is exceeded 50 percent of the time for a one hour survey, as measured by test procedures approved by the director.

J. "Nighttime hours" are those from 10:00 p.m. to 7:00 a.m. (2200-0700).

K. "Noise" means any sound not occurring in the natural environment, including, but not limited to, sounds emanating from aircraft and highways, and industrial, commercial, and residential sources.

L. "Nonimpulsive noise" means all noise not included in the definition of impulsive noise.

M. "Person" means any human being, any municipality, or other governmental or political subdivision, or any other public agency, any public or private corporation, any partnership, firm, association, or other organization, any receiver trustee, assignee, agent, or other legal representative of any of the

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foregoing, or any other legal entity, but does not include the Minnesota Pollution Control Agency.

N. "SLUCM" means the Standard Land Use Coding Manual (1969, United States Government Printing Office) which designates land activities by means of numerical codes.

O. "Sound" is an oscillation in pressure, stress, particle displacement, particle velocity, etc., in an elastic or partially elastic medium, or the superposition of such propagated alterations.

P. "Sound pressure level" is 20 times the logarithm to the base ten of the ratio of the pressure of a sound, p , to the reference pressure, p_r . For the purposes of these parts, the reference pressure shall be 20 micronewtons per square meter ($20 \mu\text{N}/\text{m}^2$). In equation form, sound pressure level in units of decibels is expressed as:

$$\text{SPL (dB)} = 20 \log_{10} p/p_r$$

Statutory Authority: *MS s 116.07 subds 2,4*

7010.0200 SEVERABILITY.

If any provision of any rule or the application thereof to any person or circumstances is held to be invalid, such invalidity shall not affect other provision or application, and to this end the provisions of all rules and the various applications thereof are declared to be severable.

Statutory Authority: *MS s 116.07 subds 2,4*

7010.0300 VARIANCE.

Whereupon written application of the responsible person or persons, the agency finds that by reason of exceptional circumstances strict conformity with any provisions of any noise rule would cause undue hardship, would be unreasonable, impractical, or not feasible under the circumstances, the agency may permit a variance upon such conditions and within such time limitations as it may prescribe for the prevention, control, or abatement of noise pollution in harmony with the intent of the state and any applicable federal laws.

Statutory Authority: *MS s 116.07 subds 2,4*

7010.0400 NOISE STANDARDS.

These standards describe the limiting levels of sound established on the basis of present knowledge for the preservation of public health and welfare. These standards are consistent with speech, sleep, annoyance, and hearing conservation requirements for receivers within areas grouped according to land activities by the noise area classification (NAC) system herein described. However, these standards do not, by themselves, identify the limiting levels of impulsive noise needed for the preservation of public health and welfare.

NAC	Day (0700-2200)		Night (2200-0700)	
	L ₅₀	L ₁₀	L ₅₀	L ₁₀
1	60	65	50	55
2	65	70	65	70
3	75	80	75	80

Statutory Authority: *MS s 116.07 subds 2,4*

7010.0500 NOISE AREA CLASSIFICATION SYSTEM ACCORDING TO LAND ACTIVITY AT RECEIVER.

Subpart 1. **In general.** Acceptable sound levels for the receiver are a function of the intended activity in that land area. The following noise area classifications are grouped and defined by the SLUCM numerical codes and descriptions.

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Subp. 2. **NAC-1.** Noise area classification-1 (NAC-1) includes the following land activities:

NAC-1

- 11 Household units (includes farm houses)
- 12 Group quarters
- 13 Residential hotels
- 14 Mobile home parks or courts
- 15 Transient lodgings
- 19 Other residential, NEC*
- 397 Motion picture production
- 651 Medical and other health services
- 674 Correctional institutions
- 68 Educational services
- 691 Religious activities
- 71 Cultural activities and nature exhibitions
- 721 Entertainment assembly
- 7491 Camping and picnicking areas (designated)
- 75 Resorts and group camps
- 79 Other cultural, entertainment, and recreational activities, NEC

Subp. 3. **NAC-2.** Noise area classification-2 (NAC-2) includes the following land activities:

NAC-2

- 4113 Railroad terminals (passenger)
- 4115 Railroad terminals (passenger and freight)
- 4122 Rapid rail transit and street railway passenger terminals
- 4211 Bus passenger terminals (intercity)
- 4212 Bus passenger terminals (local)
- 4213 Bus passenger terminals (intercity and local)
- 429 Other motor vehicle transportation, NEC
- 4312 Airport and flying field terminals (passenger)
- 4314 Airport and flying field terminals (passenger and freight)
- 4411 Marine terminals (passenger)
- 4413 Marine terminals (passenger and freight)
- 46 Automobile parking
- 4721 Telegraph message centers
- 492 Transportation services and arrangements
- 51 Wholesale trade
- 52 Retail trade -- building materials, hardware, and farm equipment
- 53 Retail trade -- general merchandise
- 54 Retail trade -- food
- 55 Retail trade -- automotive, marine craft, aircraft, and accessories
- 56 Retail trade -- apparel and accessories
- 57 Retail trade -- furniture, home furnishings, and equipment
- 58 Retail trade -- eating and drinking
- 59 Other retail trade, NEC
- 61 Finance, insurance, and real estate services
- 62 Personal services
- 63 Business services
- 64 Repair services

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- 652 Legal services
- 659 Other professional services, NEC
- 66 Contract construction services
- 67 Governmental services (except 674)
- 69 Miscellaneous services (except 691)
- 72 Public assembly (except 721, 7223)
- 73 Amusements (except 731)
- 74 Recreational activities (except 7491)
- 76 Parks

Subp. 4. NAC-3. Noise area classification-3 (NAC-3) includes the following land activities:

NAC-3

- 21 Food and kindred products -- manufacturing
- 22 Textile mill products -- manufacturing
- 23 Apparel and other finished products made from fabrics, leather, and similar materials -- manufacturing
- 24 Lumber and wood products (except furniture) -- manufacturing
- 25 Furniture and fixtures -- manufacturing
- 26 Paper and allied products -- manufacturing
- 27 Printing, publishing, and allied industries
- 28 Chemicals and allied products -- manufacturing
- 29 Petroleum refining and related industries
- 31 Rubber and miscellaneous plastic products -- manufacturing
- 32 Stone, clay, and glass products -- manufacturing
- 33 Primary metal industries
- 34 Fabricated metal products -- manufacturing
- 35 Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks -- manufacturing
- 39 Miscellaneous manufacturing, NEC (except 397)
- 41 Railroad, rapid rail transit, and street railway transportation (except 4113, 4115, 4122)
- 42 Motor vehicle transportation (except 4211, 4212, 4213, 429)
- 43 Aircraft transportation (except 4312, 4314)
- 44 Marine craft transportation (except 4411, 4413)
- 45 Highway and street right-of-way
- 47 Communication (except 4721)
- 48 Utilities
- 49 Other transportation, communication, and utilities, NEC (except 492)
- 7223 Race tracks
- 731 Fairgrounds and amusement parks
- 81 Agriculture
- 82 Agricultural and related activities
- 83 Forestry activities and related services (including commercial forest land, timber production, and other related activities)
- 84 Fishing activities and related services
- 85 Mining activities and related services
- 89 Other resource production and extraction, NEC
- All other activities

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Subp. 5. **NAC-4.** Noise area classification-4 (NAC-4) includes the following land activities:

NAC-4

- 91 Undeveloped and unused land area (excluding noncommercial forest development)
- 92 Noncommercial forest development
- 93 Water areas
- 94 Vacant floor area
- 95 Under construction
- 99 Other undeveloped land and water areas, NEC

*NEC = Not elsewhere coded

Statutory Authority: *MS s 116.07 subds 2,4*

7010.0600 MEASUREMENT PROCEDURE.

A measurement procedure approved by the director shall be used to determine the acceptability of sound levels in a given area. Such measurements shall be made at the point of human activity in the receiving area which is nearest the noise source and which is typical for the noise area classification category of the receiving area, except where existing barriers, obstructions, or reflecting surfaces prevent an accurate measurement. All measurements shall be made outdoors.

Statutory Authority: *MS s 116.07 subds 2,4*

7010.0700 EXCEPTIONS.

A. The standards of NAC-2 may apply to buildings within the following NAC-1 categories: 11, 12, 13, 14, 15, 19, 397, 651, 68, 691, 71, 721, if all of the following conditions are met:

- (1) the building is constructed and insulated in such a way as to assure that the exterior-interior sound level attenuation, measured under a measurement procedure approved by the director, is at least 30 dBA;
- (2) the building possesses year-around indoor climate control; and
- (3) the building has no facilities intended for outdoor activities, including but not limited to yards, swimming pools, patios, balconies, tennis courts, golf course, gardens, and picnic areas.

B. The NAC-1 day standards may apply to land uses in NAC-1 categories during nighttime hours in lieu of NAC-1 night standards if such land uses are not intended for overnight sleeping.

Statutory Authority: *MS s 116.07 subds 2,4*

MOTOR VEHICLE NOISE LIMITS

7010.1000 DEFINITION.

"Motor vehicle" means any self-propelled vehicle not operated exclusively upon railroad tracks and any vehicle propelled or drawn by a self-propelled vehicle and includes vehicles known as trackless trolleys which are propelled by electric power obtained from overhead trolley wires but not operated upon rails, except snowmobiles.

Statutory Authority: *MS s 116.07 subd 4*

7010.1100 PROHIBITIONS.

Subpart 1. **Operation of vehicle.** No person shall operate either a motor vehicle or combination of vehicles of a type subject to registration pursuant to Minnesota Statutes, chapter 168 at any time or under any condition of grade, load, acceleration, or deceleration in such a manner as to exceed the noise limits contained herein for the category of motor vehicle and speed limits specified, when tested with a measurement procedure approved by the director.

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Subp. 2. **Sale of vehicle.** No person shall sell or offer for sale a new motor vehicle or combination of vehicles of a type subject to registration pursuant to Minnesota Statutes, chapter 168 which when maintained according to the manufacturer's specifications would exceed the noise limits contained herein for the category of motor vehicle and speed limits specified, when tested with a measurement procedure approved by the director.

Subp. 3. **Modification of vehicle.** No person shall modify a motor vehicle or combination of vehicles of a type subject to registration pursuant to Minnesota Statutes, chapter 168 in a manner which will amplify or increase the noise emitted by the vehicle, above the noise limits contained herein for the category of motor vehicle and speed limits specified, when tested with a measurement procedure approved by the director. No person shall operate a motor vehicle so modified.

Subp. 4. **Sale of parts.** No person shall sell or offer for sale replacement or additional parts for a motor vehicle or combination of vehicles of a type subject to registration pursuant to Minnesota Statutes, chapter 168 which when installed in the vehicle will amplify or increase the noise emitted by the vehicle, above the noise limits contained herein for the category of motor vehicle and speed limits specified, when tested with a measurement procedure approved by the director. No person shall operate a motor vehicle incorporating such parts.

Statutory Authority: *MS s 116.07 subd 4*

7010.1200 SCOPE.

This chapter applies to the total noise from a vehicle or combination of vehicles of a type subject to registration pursuant to Minnesota Statutes, chapter 168 and shall not be construed as limiting or precluding the enforcement of any other provision of law relating to motor vehicle exhaust noise.

Statutory Authority: *MS s 116.07 subd 4*

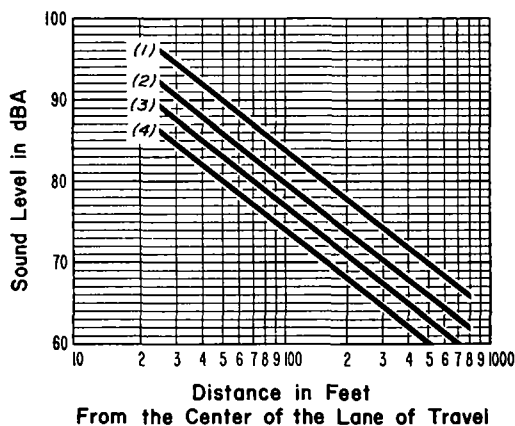
7010.1300 EXCEPTIONS.

Vehicles under parts 7010.1500 and 7010.1600 are allowed to exceed the noise limits contained herein when performing acceleration maneuvers for safety purposes.

Statutory Authority: *MS s 116.07 subd 4*

7010.1400 NOISE LIMIT FOR VEHICLES OVER 10,000 POUNDS.

Motor vehicle noise limits for vehicles with a manufacturer's gross vehicle weight rating of more than 10,000 pounds and any combination of vehicles towed by such motor vehicle.



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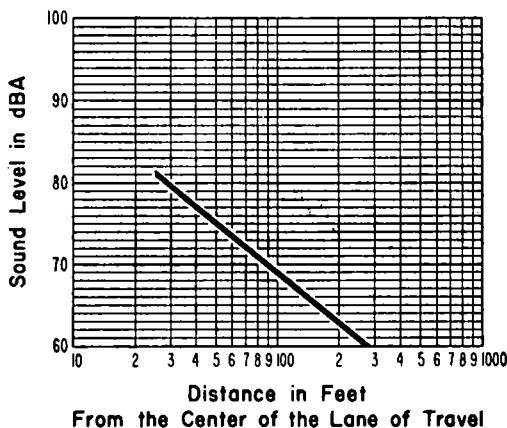
7010.1400 NOISE POLLUTION CONTROL

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- A. Speed limits greater than 35 mph.
- B. Speed limits equal to or less than 35 mph and stationary run-up tests (for vehicles with governed engines). For stationary run-up tests on all-paved surfaces, add 2 dBA.
- C. Speed limits equal to or less than 35 mph and stationary run-up tests (for vehicles with governed engines), for vehicles manufactured on or after January 1, 1978. For stationary run-up tests on all-paved surfaces, add 2 dBA.
- D. Speed limits equal to or less than 35 mph and stationary run-up tests (for vehicles with governed engines), for vehicles manufactured on or after January 1, 1982. For stationary run-up tests on all-paved surfaces, add 2 dBA.

Statutory Authority: *MS s 116.07 subd 4*

7010.1500 MOTOR VEHICLE NOISE LIMITS FOR MOTORCYCLES.



- A. For vehicles manufactured before January 1, 1975.
- B. Speed limits greater than 35 mph for vehicles manufactured on or after January 1, 1975.
- C. Speed limits equal to or less than 35 mph for vehicles manufactured on or after January 1, 1975.

Statutory Authority: *MS s 116.07 subd 4*

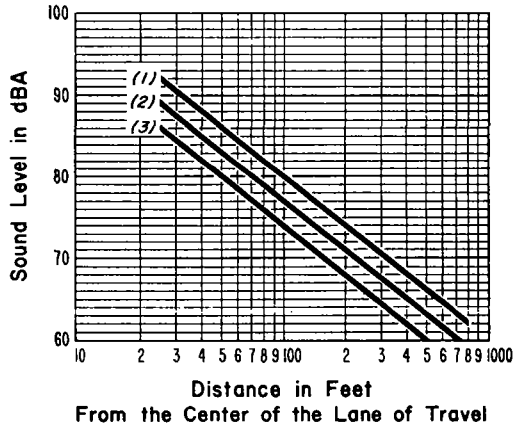
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NOISE POLLUTION CONTROL 7010.1600

7010.1600 NOISE LIMITS FOR OTHER VEHICLES.

Motor vehicle noise limits for any other motor vehicle not included under parts 7010.1400 and 7010.1500 and any combination of vehicles towed by such motor vehicle.



Statutory Authority: *MS s 116.07 subd 4*