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Title 26
DEPARTMENT OF THE ENVIRONMENT

Subtitle 02 OCCUPATIONAL, INDUSTRIAL, AND RESIDENTIAL HAZARDS.

Chapter 03 Control of Noise Pollution

Authority Environment Article, §3-401, Annotated Code of Maryland

Preface

The Environmental Noise Act of 1974 of the State of Maryland declares as policy the limitation of noise to that level which will protect the health, general welfare, and property of the people of the State. It requires that the Department assume responsibility for the jurisdiction over the level of noise, and prepare regulations for the control of noise, including the establishment of standards for ambient noise levels and equipment performance with respect to noise, for adoption by the Secretary of the Environment. Enforcement of the regulation and Standards is the responsibility of the Department in all areas, using the facilities and services of local agencies within the areas to the greatest extent possible. The Department shall coordinate the programs of all State agencies relating to noise abatement, and each State agency prescribing sound level limits or regulation respecting noise shall obtain the endorsement of the Department in prescribing any limits or regulations.

.01 Definitions.

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

B. "Construction" means any site preparation, assembly, erection, repair, alteration, or similar activity.

C. "Day-night average sound level (Ldn)" means in decibels, the energy average sound level for a 24-hour day with a 10 decibel penalty applied to noise occurring during the nighttime period; i.e., noise levels occurring during the period from 10 p.m. one day until 7 a.m. the next are treated as though they were 10 dBA higher than they actually are. The use of the A-weighting is understood. The mathematical expression for Ldn is as follows:

$$L_{dn} = 10 \log_{10} \left[\left(\frac{15}{24}\right) 10^{L_d + 10} + \left(\frac{9}{24}\right) 10^{(L_n + 10) + 10} \right]$$

where Ld = The daytime average sound level.

Ln = The nighttime average sound level.

D. "dBA" mews abbreviation for the sound level in decibels determined by the A-weighting network of a sound level meter or by calculation from octave band or one-third octave band data.

E. "Daytime hours" means 7 a.m. to 10 p.m., local time.

F. "Decibel (dB)" means a unit of measure equal to ten times the logarithm to the base ten of the ratio of a particular sound pressure squared to a standard reference pressure squared. For the purpose of this subtitle, 20 micropascals shall be the standard reference pressure.

G. "Demolition" means any dismantling, destruction, or removal activities.

H. "Department" means the Department of the Environment.

I. "Emergency" means any occurrence or set of circumstances involving actual or imminent physical trauma or property damage which demands immediate action.

J. "Environmental noise" means the noise that exists at any location from all sources.

K. "Environmental noise standards" means the goals for environmental noise, the attainment and maintenance of which, in defined areas and under specific conditions, are necessary to protect the public health and general welfare.

L. "Equivalent sound level" (also "average sound level") means the level of a constant sound which, in a given situation and time period, would convey the same sound energy as does the actual time-varying sound during the same period. Equivalent sound level is the level of the time weighted, mean-square, A-weighted sound pressure. A numerical subscript may be used to indicate the time period under consideration; i.e., Lea(24) or Lm(8) for 24-hour and 8-hour periods, respectively. No subscript indicates a 24-hour period. The mathematical expression for the Leq is as follows:

$$L^{eq} = 10 \log_{10} \left[\frac{1}{t_2 - t_1} \int_{t_1}^{t_2} 10^{L_A(t)/10} \, dt \right] \text{dBA}$$

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where t1 and t2 are the beginning and ending times, respectively, of the period over which the average is determiner and LA (t) is the instantaneous A-weighted sound pressure level fluctuating with time.

M. "Nighttime hours" means 10 p.m. to 7 p.m., local time.

N. "Noise" means the intensity, frequency, duration, and character of sound, including sound and vibration of sub-audible frequencies.

O. "Noise pollution" means the presencee of noise of sufficient loudness, character, and duration, which whether from a single source or multiple sources, is, or may be predicted with reasonable certainty to be, injurious to health or which unreasonably interferes with the proper enjoyment of property or with any lawful business or activity.

P. "Periodic noise" means noise possessing a repetitive on-and-of characteristic

Q. "Person" means any individual group of individuals, firm partnership, voluntary association, or private, public, or municipal corporation, or political subdivision of the State, or department, bureau, agency, or instrument of federal, State, or local government responsible for the use of property

R. "Prominent discrete tone" means any sound that can be distinctly heard as a single pitch or a set of single pitches. For the purposes of this regulation, a prominent discrete tone shall exist if the one-third octave band sound pressure level in the band with the tone exceeds the arithmetic average of the sound pressure levels of the 2 contiguous one-third octave bands by 5 dB for center frequencies of 500 Hz and above and by 8 dB for center frequencies between 160 and 4oo Hz and by 15 dB for center frequencies less than or equal to 125 Hz.

S. "Sound level" means, in decibels, the weighted sound pressure level measured by the use of a sound level meter satisfying the requirements of ANSI Sl.4 1971 "Specifications for Sound Level Meters". Sound level and noise level are synonymous. The weighting employed shall always be specified.

T. "Sound level meter" means an instrument, meeting ANSI Sl.4

1971 "Specifications for Sound Level Meters", comprising a microphone, an amplifier, an output meter, and frequency-weighting network(s) that is used for the measurement of sound pressure levels in a specified manner.

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U. Sound Pressure.

(1) "Sound pressure" means the minute fluctuations in atmospheric pressure, which accompany the passage of a sound wave.

(2) For a steady sound, the value of the sound pressure average over a period of time.

(3) Sound pressure is usually measured in dynes per square centimeter (dyne/cm2), or in newtons per square meter fl4/m2), or in micropascals.

V. "Sound pressure level" means, in decibels, 20 times the logarithm to the base ten of the ratio of a sound pressure to the reference sound pressure of 20 micropascals (20 micronewtons per square meter). In the absence of any modifier, the level is understood to be that of a root-mean-square pressure.

W. "Source" means any person or property, real or personal, contributing to noise pollution.

K "Vibration" means any oscillatory motion of solid bodies.

Y. "Zoning district" means a general land use category, defined according to local subdivision, the activities and uses for which am generally uniform throughout the subdivision. For the purposes of this regulation, property which is not zoned "residential", "commercial", or "industrial", shall be classified according to use as follows:

(1) "Commercial" means property used for buying and selling goods and services;

(2) "Industrial" means property used for manufacturing and storing goods;

(3) "Residential" means property rued for dwellings.

.02 **Environmental Noise Standards.**

A. Precepts.

(1) It is known that noise above certain levels is harmful to the health of human. Although precise levels at which all adverse health effects occur have not definitely been ascertained it is known that one's well-being can be affected by noise through loss of sleep, speech interference, hearing impairment, and a variety of other psychological and physiological factors. The estab1isllment of ambient noise standards, or goals, must provide margins of safety in reaching conclusions based an available data which relate noise exposure to health and welfare effects, with due consideration to technical and economic factors.

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(2) The environmental noise standards set forth here represent goals expressed in terms of equivalent A-weighted sound levels, which are protective of the public health and welfare. The ambient noise levels shall be achieved through application, under provisions of laws or regulations or otherwise, of means for reducing noise levels including, but not limited to, isolation of noise producing equipment, dampening of sound waves by insulation, equipment modification and redesign, and land use management.

B. Standards for Environmental Noise-General.

(1) The standards are goals for the attainment of an adequate environment. The standards set out in Regulation .03 are intended to achieve these goals.

(1) The following sound levels represent the standards for the

State by general zoning district:

Table I
Environmental Noise standards

Zoning District	Level	Measure
Industrial	70 dBA	L_{eq}(24)
Commercial	64 dBA	L_{dn}
Residential	55 dBA	L_{dn}

.03 General Regulations.

A. Noise and Vibration Prohibitions.

1) A person may not cause or permit noise levels which exceed those specified in Table 2 except as provided in §A(2) or (3), or §B, below.

Table .2
Maximum Allowable Noise Level (dBA)
For Receiving Land Use Categories

Effective Date	Day/Night	Industrial	Commercial	Residential
	Day	75	67	65
Upon Adoption	Night	75	62	55

(2) A person may not cause or permit noise levels emanating from construction or demolition site activities which exceed:

(a) 90 dBA during daytime hours;

(b) The levels specified in Table 2 during nighttime hours.

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(3) A person may not cause or permit the emission of prominent discrete tones and periodic noises which exceed a level which is 5 dBA lower than the applicable level listed in Table 2.

(4) A person may not cause or permit, beyond the property line of a source, vibration of such direct intensity to cause another person to be aware of the vibration by such direct means as sensation of touch or visual observation of moving objects. The observer shall be located at or within the property line of the receiving property when vibrationdeterminations are made.

B. Exemptions.

(1) The provisions of this regulation may not apply to devices used solely for the purpose of warning, protecting, Or alerting the public, or some segment thereof, of the existence of an emergency situation.

(2) The provisions of this regulation do not apply to the following

(a) Household tools and portable appliances in normal usage.

(b) Lawn care and snow removal equipment (daytime only) when used and maintained in accordance with the manufacturer's specifications.

(c) Agricultural field machinery when used and maintained in accordance with manufacturer's specifications.

(d) Blasting operations for demolition, construction, and mining or quarrying (daytime only).

(e) Motor vehicles on, public roads.

(f) Aircraft and related airport operations at airports licensed by the State Aviation Administration.

(g) Boats on State waters or motor vehicles on State lands under the jurisdiction of the Department of Natural Resources.

(h) Emergency operations.

(i) Pile driving equipment during the daytime hours of 8 a.m. to 5 p.m.

(j) Sound not electronically amplified created by sporting, amusement, and entertainment events and other public gatherings operating according to terms and conditions of the appropriate local jurisdictional body. Thin includes but is not limited to athletic contests, amusement parks, carnivals, fairground, sanctioned auto racing facilities,

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parades, and public celebrations. This exemption only applies between the hours of 7 mm. and 12 midnight

(k) Rapid rail transit vehicles and railroads.

(l) Construction and repair work on public property.

(m) Air conditioning or heat pump equipment used to cool or heat housing on residential property. For this equipment, a person may not cause or permit noise levels which exceed 70 dBA for air conditioning equipment at receiving residential property and 75 dBA for heat pump equipment at receiving residential property.

C. Variance Procedure.

(1) Any Person who believes that meeting the requirements of §A, above, is not practical in a particular case may request an exception to its requirements.

(2) Requests submitted to the Department shall be in writing and shall include evidence to show that compliance is not practical.

(3) Upon receipt of a request for an exception, the Department shall schedule a hearing to be held within 60 days.

(4) The applicant for the exception, at least 30 days before the hearing date, shall advertise prominently the hearing by placing a notice in a newspaper of general circulation in the subdivision in which the facility or source for which the exception is sought is located. The notice shall include the name of the facility or source and such additional information as the Department may rewire.

(5) Based upon evidence presented at the hearing, the Secretary may grant an exception to §A, above, for a period not to exceed 5 years

Under terms and conditions appropriate to reduce the impact of the

exception.

(6) Exceptions shall be renewable upon receipt by the Department

Of evidence that conditions under which the exception was originally granted have not changed significantly.

D. Measurement.

(1) The equipment and techniques employed in the measurement

Of noise levels may be those recommended by the Department, which

WAY, but need not, refer to currently accepted standards or recognized

Organizations, including, but not limited to, the American National

Standards Institute (ANSI), American Society for Testing and Materials (ASTM),

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Society of Automotive Engineers (SAE), and the United States Environmental Protection Agency (EPA).

(2) The measurement of noise levels shall be conducted at points on or within the property line of the receiving property or the boundary of a zoning district, and may be conducted at any point for the determination of identity in multiple source situations.

(3) Sound level meters used to determine compliance with Regulation .03 shall meet or exceed the specifications of the American National Standards Institute or -its successor bodies ANSI Sl.4-1971 for

Type II sound level meters.

.04 Emission Regulations.

Reserved.

.05 Penalties.

A. Civil Penalty. Any person who willfully violates these regulations shall be liable to a civil penalty of not more than S10,000. Each day during which a violation continues them shall be liability for a separate penalty.

B. Plan for Compliance. A violator who has submitted a plan for compliance with these regulations and has that plan or amendments to it approved by the Secretary, upon recommendation of the Department, may not be considered to be in violation of these regulations as long as he acts in accordance with the original or amended plan.

Administrative History

Effective date: August 6, 1975 (2:17 Md R l189)

Regulation .01A-1, W-I adopted effective February IS, 1982 (9:3 Md R 222); repealed effective March 28, 1983 (10:6 Md R 558)

Regulations .01 and.03A, B, D amended effective September 14, 1977 (4:19 Md R.1468)

Regulation .01C amended effective March 28, 1983 (10:6 ML R 558)

Regulations .01C, Q; .02B; .038, D amended effective February 15, 1982(9:3 Md. R. 222)

Regulation .03A amended as an emergency provision effective November 13, 1979 (6:24 Md R 1917); emergency status expired March 29, 1980

Regulation .03A and B amended effective March 28, 1983 (10:6 Md R 558)

Regulation .04 repealed effective September 14, 1977 (4:19 Md R 1468).

Chapter recodified from COMAS 10.20.01 to COMAS 26.02.03

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Maryland Department of the Environment

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Parris N. Glendening
Governor

Jane T. Nishida
Secretary

Maryland's Noise Control Program

Purpose
The Noise Control Program was established in the mid 1970's to provide technical assistance and enforcement help to citizens and local jurisdictions across the State regarding community intruding noise issues that are not, for whatever reason, adequately handled at the local level. Noise has become an increasingly contentious "Quality of Life" issue as the State's population increases and urban sprawl progresses. The Noise Program pursues its mission on a complaint driven basis addressing specific requests from individual citizens as well as governmental entities. Because of very limited staff the program actively encourages local jurisdictions to take a more active role in addressing noise problems and issues while the program stands ready to provide technical back-up, enforcement help, noise control training and advisory assistance. The program has been addressing approximately 150 noise complaints yearly across the State resulting in about 300 to 400 annualized site visits. It is the program's goal when possible to resolve noise violations as opposed to primarily pursuing enforcement and penalties.

Authority
State: Environment Article, Title 3-101 .... and COMAR, Title 26.02.03....

Process
In addressing noise complaints a small portion of those registered can be resolved by telephone without field investigation. However, the vast majority of complaints require multiple field visits to monitor and measure the offending noise-levels, this may occur anytime of the day or night, including weekends and holidays, depending on the noise source. In evaluating and processing noise complaints the program utilizes state of the art real-time computer integrated sound level analyzers for determining the existence of a community noise violation. When a noise level violation is encountered primary emphasis is placed on cooperative resolution rather than penalties and litigation. This approach has been quite successful in almost all cases.

Contact
Dave Jarinko / Noise Control Specialist: 410-537-3938
George Harman / Program Manager: 410-631-3856

The Noise Control Program - How it Works

1. Established by the Legislature in the mid 1970s as a 'quality of life' program.
2. State noise regulations set a maximum intruding sound level limit statewide: therefore **all jurisdictions have a Noise Regulation**.
3. The maximum limit does not constitute silence or assure total lack of annoyance from an intruding sound (50% plus of complaints do not exceed the limit - and are not actionable).
4. Because the State sets the maximum limit, which may be considered in some areas to be too high, it allows the local jurisdictions to establish a lower limit or a more restrictive regulation if they so choose. (as to time, sound level limits, and exemptions.)
5. State regulations establish two time periods and two sound level limits:
    a. Daytime 7 a.m. - 10 p.m. 65 dBA - for residential receiving properties
    b. Nighttime 10 p.m. - 7 a.m. 55 dBA - for residential receiving properties
6. If a local jurisdiction establishes more restrictive limits, it is strongly suggested that the limit be tied to a specific decibel level and not a subjectively defined annoyance criteria.
7. Police and local officials initially process 99% of all noise related complaints across the State. This statistic **is not as good as it appears** because most police and local jurisdictions do not have sound level meters or noise training and typically do not pursue noise complaints unless they involve additional elements of disruptive behavior or illegal activity.
8. The Noise Program, upon request, will investigate those complaints that fall through the cracks at the local level.
9. The Noise Program is not designed or intended to be a first responder to complaints. It is designed to handle noise complaints that are not adequately addressed at the local level.
10. The Noise Program is complaint driven. It does not seek out noise sources.
11. To be handled by Noise Control, a noise complaint must be repetitive or reoccurring with some degree of predictability. The Noise Program cannot handle a one-time noise occurrence or a non-predictable infrequently occurring noise.
12. A noise complaint can be registered by calling 410-631-3991
13. When a complaint is registered, the complainant must have information concerning the type of noise and the probable time or times of occurrence.
14. When a complaint is registered, a site visit is arranged to take sound level measurements. Measurements are taken at the complainant's property, not at the source of the sound.
15. If a sound level violation is measured, the responsible party is notified to take corrective action. Failure to do so could result in a penalty of up to $10,000 per each day of continuing violation. However, to date, Noise Control has gotten compliance in all cases without resorting to financial penalties.
16. **Examples of common noise complaints subject to COMAR regulations**:
    a. Office Buildings, Hospitals, Schools and even Nursing Homes
    b. Dirt Bike noise - riding legally but too close to neighboring homes
    c. Band noise - clubs, taverns, bars, restaurants, schools, practice sessions
    d. Swimming pool pumps
    e. Early morning construction noise prior to 7 a.m.
    f. Power sweepers at night
    g. Truck mounted refrigeration units / parking lot truck noise / shopping centers
    h. Gun clubs - 9 Counties are subject to the noise regulations / 14 Counties are exempt
    i. Early morning trash pickup (usually dumpster emptying noise)
    j. Commercial and industrial equipment noise (commonly HVAC units)
    k. Loud speakers at: car dealerships / fast food restaurants / swim clubs / etc.
    l. Church bells
    m. Barking dogs - MDE will only address kennel related complaints, not household pets.
    n. And many others too numerous to mention
17. **Exemptions from the COMAR noise regulations:**
    a. Emergency sirens and warning signals

   b. Railroads
   c. Motor vehicles on public roads - addressed by MSP and SHA
   d. Aircraft and airports - addressed by FAA and MAA
   e. Construction noise 7 a.m. - 10 p.m.
   f. Boats on state controlled waters - addressed by DNR
   g. Residential Heat Pumps and Air-conditioners
   h. Construction on Public Property at any time
   i. Sanctioned auto racing facilities - 7 a.m. to midnight
   j. Parades, public celebrations, amusement parks, sporting events

18. **In addition to handling specific noise complaints, Noise Control will upon request conduct noise control and enforcement training classes as well as attend hearings and departmental meetings regarding noise related issues to provide technical information and / or testimony.**
19. To reiterate - The Noise Control Program is a Complaint driven activity set up to handle repetitive and predictable noise sources that have not been resolved at the local level. It is not designed to be a first responder to a noise complaint.
20. Contact - Dave Jarinko / Noise Control Specialist: 410-537-3938 or George Harman / Program Manager: 410-631-3856.