

## Noise Control Bylaw

### 1. Authority

This Bylaw is issued by the Town of Pepperell pursuant to its authority under M.G.L. Chapter 40, Section 21 and Chapter 111, Sections 142A-142M, and 310 CMR 7.00, as reasonable and necessary for the protection of the health and welfare of the citizens of the Town of Pepperell.

### 2. Purpose

The Town of Pepperell hereby finds that excessive or unwarranted noise is a nuisance and a potential health hazard. Recognizing that people have a right to—and should be ensured—an environment free from excessive and unwarranted noise, the Town of Pepperell establishes this Bylaw to protect, preserve, and promote the health, safety, welfare, and quality of life for its citizens.

The intention is not to restrict people's enjoyment of their home, property, or business but to ensure that the Town and its citizens are protected from intrusion of excessive noise generation by:

- i. Providing a mechanism for control, prevention, mitigation, and arbitration of noise through the establishment of maximum noise levels for lawful uses and activities,
- ii. Providing a venue for adjudication, arbitration, and if necessary, the definition of offenses and power to impose penalties by the Town of Pepperell Board of Health to preserve the rural character of our town.

Noise is hereby declared a nuisance if it:

- i. is excessive, unnecessary, prolonged, unusually loud, or unnatural in its time, place, and use, and constitutes an annoyance to a person of ordinary sensibility to sound;
- ii. materially and substantially interferes with the ordinary comfort of life, and the reasonable use and enjoyment of property.

Therefore,

- i. No person owning, leasing, or controlling a source of sound shall willingly, negligently, or through failure to provide necessary equipment, service, or maintenance and/or failure to take necessary precautions, cause, allow, or permit excessive or unwarranted noise as described in Section 5.
- ii. This Bylaw shall apply to all sound originating within the limits of the Town of Pepperell and is intended to be consistent in scope and application with relevant state and federal statutes and Town Bylaws.
- iii. All Town of Pepperell departments and agencies shall, to the fullest extent consistent with federal and state laws and Town Bylaws, carry out their programs in such a manner as to comply with this Bylaw.
- iv. Provisions in this Bylaw shall not apply to any activity to the extent that the Bylaw has been preempted by state or federal law.

### 3. Prohibitions on Excessive or Unwarranted Noise

Generation of excessive or unwarranted noise is prohibited, except in the following cases:

- A. **Construction/maintenance power equipment.** Motorized devices and equipment engaged in home construction (including site preparation and restoration), roof installation, building restoration, and like

activities and/or demolition shall be permitted for use between the hours of 7:00 a.m. and 7:00 p.m., or as otherwise allowed by a Town of Pepperell permit issued for such activity.

**EXCEPTIONS:**

- i. Construction-related activity as specified in Section 3A, on days for which “Danger” or “Extreme Danger” heat conditions are forecast by the National Weather Service, may begin before 7:00 a.m., but not before 5:30 a.m.

**B. Commercial trash collection.** Vehicles used for the collection of trash, rubbish, refuse, or debris, such as but not limited to commercial compactors, are permitted to operate on any point of public or common right-of-way for vehicular traffic between the hours of 6:00 a.m. and 8:00 p.m.

**EXCEPTIONS:**

- i. Commercial trash collection may take place at any time within any area of the Town of Pepperell zoned Industrial Zone (I) or Commercial Zone (C) under the Zoning Bylaw.

**C. Commercial deliveries or pickups.** Deliveries or pickups for commercial or business purposes are permitted between 6:00 a.m. and 8:00 p.m., unless the noise level of such deliveries or pickups is excessive or unwarranted.

**EXCEPTIONS:**

- i. Commercial deliveries or pickups may take place at any time within any area of the Town of Pepperell zoned Industrial Zone (I) or Commercial Zone (C) under the Zoning Bylaw.

**D. Domestic mechanical equipment.** The outdoor use of domestic mechanical equipment such as, but not limited to, lawn mowers, leaf blowers, and power saws is permitted between the hours of 7:00 a.m. and 9:00 p.m.

**E. Fixed plant equipment.** Excessive or unwarranted noise caused by fixed plant equipment such as but not limited to air conditioners, pumps, fans, furnaces, compressors, engines, ventilation equipment, fuel/pipeline vents or blowdowns, and similar equipment is prohibited. As used herein, fixed shall mean any equipment mounted, secured, or fastened to the ground or to any building or structure, as well as any equipment that requires the assistance of motorized equipment to move or transport.

**Any exceptions listed in Section 3 shall not apply if the noise is determined to exist as the result of negligent conduct or actions.**

#### **4. Exemptions**

The provisions of this Bylaw shall not apply to sounds emitted during or associated with any of the following:

- A. Police, fire, and civil and national defense activities, or training exercises by public safety personnel related to emergency activities
- B. Any bell or chime from any school, church, or government building
- C. Any events that are permitted by the Town, such as parades, public gatherings, or sporting events for which permits have been issued
- D. Noncommercial public speaking and public assembly activities, as guaranteed by state and federal constitutions
- E. Operation of any activity that is an ordinary or ancillary aspect of farming
- F. Emergency work including but not limited to the operation of any mechanical device, apparatus, vehicle, or equipment used in connection with that emergency
- G. Snow removal
- H. Normal motor vehicle traffic that does not persistently or repetitively reach the excessive or unwarranted noise level as defined in Section 5.A. Persistent, repetitive commercial motor vehicle traffic, in excess of twice per hour, that exceeds the excessive noise level standard defined in Section 5.A., is explicitly prohibited under this Bylaw

I. Any activity to the extent that this Bylaw has been preempted by state or federal laws.

**These exemptions shall not apply if the noise is determined to exist as the result of negligent conduct or actions.**

## **5. Measurement of Excessive or Unwarranted Noise**

It shall be unlawful for any person to make or produce excessive or unwarranted noise. A determination that excessive or unwarranted noise is caused by a given noise source will be made in accordance with the following standards using the "Definitions" set forth in the Appendix to the Bylaw.

- A. Excessive or unwarranted noise, as used in this Bylaw, shall mean any of the following:
- i. Any condition in which a broadband impulsive or continuous sound source raises the noise level by 10 or more dBA above the ambient noise level
  - ii. Any condition in which a tonal sound source raises its third-octave band level by 3 dB or more above the adjacent third-octave-band levels
- B. Under no condition will a persistent noise source be permitted that exceeds an absolute sound pressure level of 65 dBA, in accordance with the measurement conditions outlined below.

**These standards are based on widely accepted national and state standards for community noise control bylaws and ordinances, including those identified in the References contained in the Appendix at the end of this Bylaw.**

- C. Determination of excessive or unwarranted noise originating from private property of any type (i.e., any form of residential, commercial, or industrial property) shall be made at any point of the property boundary.
- D. Determination of excessive or unwarranted noise originating from public property shall be made at any location a passerby might lawfully occupy.
- E. Measurement of the noise source level shall be made over a time interval approximately equal to, but not to exceed, the duration of the noise source or noise event in question. For example, in the case of a continuous persistent stimulus, such as an air conditioning unit or machinery noise, an appropriate measurement duration should be at least 5 minutes. In the case of a transient, impulsive stimulus, such as a gas or steam blow-off or pile driver, the measurement interval needs to be shorter, matched to the duration of the noise stimulus.
- F. Noise level measurements made for the purpose of establishing compliance, or lack thereof, with this Bylaw may be submitted by a resident or business owner to any enforcing person, as specified in Section 6, as long as they can be demonstrated to be in compliance with the conditions outlined in this section. The Town of Pepperell Board of Health may, at its discretion, consult qualified experts for the purpose of validating a complaint.
- i. Any resident or business owner within the Town of Pepperell may submit a complaint that another person or business is violating the provisions of this Bylaw.
- G. Ambient baseline noise levels in the Town of Pepperell may be measured by a qualified expert appointed by the Board of Health. If no such ambient baseline noise levels exist at the time a complaint is brought, or a site review is conducted, any person seeking relief under this Bylaw may submit ambient baseline measurements made in compliance with the conditions set forth in this section. The Town of Pepperell Board of Health may, at its discretion, consult qualified experts for the purpose of validating a complaint.
- H. In no instance should any part of this Bylaw be interpreted so as to abrogate the power of the Board of Health pursuant to M.G.L. Chapter 111, Sections 142A-142M, and 310 CMR 7.00.

## 6. Enforcement and Penalties

The principal enforcement agency for this Bylaw is the Town of Pepperell Board of Health or its designated agent. The Town of Pepperell police will be the designated first responder to situational or incidental noise complaints, which they may choose to refer to the Board of Health.

- A. Upon receipt of a complaint brought under the terms and conditions of this Bylaw, the Board of Health or its designated agent may, at its discretion, convene an arbitration hearing to try to resolve the matter. This arbitration hearing must be called within 30 days of the complaint being filed. If the arbitration does not result in resolution, either through inability to reach agreement or failure to participate by the party/parties involved, the Board of Health may take any and all actions as appropriate to enforce this Bylaw.
- B. Any person who violates any provision of this Bylaw shall be subject to a fine of \$100 per violation. The imposition of a penalty for any violation shall not excuse the violation or permit it to continue. Each day that such violation continues shall be considered a separate offense, and subject to a fine of \$100.
- C. The Board of Health, upon finding that a persistent and habitual excessive noise violation has occurred, may impose a requirement that acceptable abatement measures be enacted by the offending party within 30 days of issuance of a decision stating the finding. Noise abatement measures shall be deemed as acceptable at the sole discretion of the Board of Health.
- D. If the offending party is unable or unwilling to moderate the subject activity in a manner that achieves compliance with this Bylaw, or is unable or unwilling to enact abatement measures, the Board of Health shall issue a cease and desist order against the activity or use that fails to comply with the stated requirements or provisions of this Bylaw.

## 7. Permitting of New Uses and Structures in Commercial and Industrial Zoning Districts

- A. No resident, property owner, or business owner or operator of any land or use in a Town of Pepperell Commercial or Industrial Zoning District shall commence or cause to be commenced the construction of any structure or introduction of any land use unless it is first determined by the Board of Health to be in conformance with the terms and conditions established under this Bylaw.
- B. Any application for a permit to the Town of Pepperell for improvement to land in the Commercial or Industrial Zoning District, including but not limited to a building permit, occupancy permit, business permit, or special permit issued by Planning Board, Zoning Board of Appeals, or Board of Selectmen shall require a review by the Board of Health to determine compliance with this Bylaw.
  - i. This application must be made in writing, and shall include any and all information and data supporting the claim that the terms of this Bylaw will be met and maintained, as well as any other information which the Board of Health may reasonably require for this purpose.
- C. The Board of Health may conduct such inspections and measurements as are necessary to ensure the accuracy of any report submitted to ascertain compliance with this Bylaw. These may include on-site inspections by a noise or sound expert during specified periods of construction.
- D. The Board of Health may, at its discretion, impose any mandatory noise abatement or mitigation measures it believes to be necessary for the proposed building or use to meet with the terms and conditions of this Bylaw.
- E. No new or substantially modified structure as determined by the Building Inspector on land used or zoned as commercial or industrial shall be approved for construction unless the owner or developer of such land has demonstrated, in accordance with the terms and conditions delineated herein, that the completed structure and the activities associated with and on the same property as the structure, will comply with the provisions of this Bylaw when operation commences and will continue to comply.

**8. Relationship to Other Laws**

Nothing in this Bylaw shall be construed to restrict, amend, repeal, or otherwise limit the application or enforcement of existing federal, state, or Town of Pepperell laws.

**9. Rules and Regulations**

The Board of Health may promulgate, after public notice and hearing, rules and regulations to effectuate the purposes and intent of this Bylaw. However, failure by the Board of Health to promulgate such rules and regulations shall not act to suspend or invalidate the effect of this Bylaw.

**10. Severability**

If any section, paragraph or part of this Bylaw is for any reason declared invalid or unconstitutional by any court, every other section, paragraph, and part shall continue in full force.

## APPENDIX

### Definitions

**A-weighted decibel (dBA)**—refers to the nationally recognized standard for measured sound pressure level, normalized for the frequency-dependent relative loudness perceived by the human ear, and expressed in decibels relative to a reference pressure of 20 micropascals.

**Absolute**—a direct measurement in calibrated sound pressure level: Not comparative or relative in any way.

**Ambient noise level (Leq)**—the background noise level, or equivalent continuous noise level, measured in A-weighted decibels that is used as the reference level against which a new intrusive sound source may be compared. The Board of Health may, at its discretion, impose specific requirements as to the conditions under which the ambient noise level is to be established so as to insure its relevance and fairness to the quantification of the subject noise stimulus, including time duration and time of day.

**Decibel (dB)**—a logarithmic unit used in measuring the sound pressure level relative to a reference pressure of 20 micropascals.

**Excessive**—more than is necessary, normal, or desirable; immoderate

**Noise**—a sound.

**Noise level**—the property of broadband sound (that is, sound with multiple tones/frequencies, or a continuous band of frequencies) as measured in A-weighted decibels (dBA) with a sound level meter that meets or exceeds the requirement for a Type I or Type II sound-level meter as specified under American National Standards Institute (ANSI) Specification S1.4-1974 or its successor (ANSI, 1974/1983, S1.4), which is capable of making absolute measurements). For the purposes of characterizing the relative increase in sound pressure level caused by a noise under review, at its discretion the Board of Health may allow the presentation of measurements made by a more readily available instrument, such as a smartphone or tablet with a sound-pressure-meter application.

**Octave band**—a portion of the sound spectrum with the upper limit twice the frequency of the lower limit. Octave bands are named for their center frequency (geometric mean) of the band. Standard octave bands for sound level meters are defined by the American National Standards Institute (ANSI, 2009, S1.11).

**Relative**—a term used to describe any measurement of a noise stimulus made with respect to a contemporaneous measurement of the ambient noise level, as defined below. A relative measurement is understood to be self-normalizing in that it quantifies the intrusive nature of a noise source in terms of a known, ordinary acceptable noise background level. Further, a relative measurement inherently compensates for measurement error or bias associated with a particular measurement device by automatically cancelling any such errors as they are common to measurement of noise stimulus and background. As such, it is imperative that any relative measurement be performed using measurements of noise stimulus and background by the same exact device, made within a reasonable time interval.

**Tonal**—a sharply narrowband, continuous-wave (CW) signal or acoustic stimulus, like a long whistle or whirring sound. Due to its very concentrated nature in frequency, a tonal acoustic disturbance tends to possess a much greater annoyance factor, or even cause physical discomfort, at much lower relative sound pressure levels than a broadband noise source.

**REFERENCES**

American National Standards Institute (ANSI). (1974/1983). American National Standard Specification for Sound Level Meters: ANSI S1.4A-1985 Amendment to ANSI S1.4-1983. Melville, NY: Acoustical Society of America.

American National Standards Institute (ANSI). (2009). *Specification for octave-band and fractional-octaveband analog and digital filters*. Melville, NH: Secretariat, Acoustical Society of America.

Berglund, B., Lindvall, T., & Schewela, D. (2000). *Guidelines for community noise*. Geneva, Switzerland: World Health Organization (WHO).

Massachusetts Department of Environmental Protection Noise Pollution Policy Interpretation (2017). See the related law, regulations, and policy: M.G.L. Chapter 111, Sections 142A-142M, and 310 CMR 7.00: Air Pollution Control.

<https://www.mass.gov/files/documents/2018/01/31/noise-interpretation.pdf>

World Health Organization (WHO) Guidelines for Community Noise (1999).

<https://www.who.int/docstore/peh/noise/guidelines2.html>

World Health Organization Guidelines for Community Noise (1999), Chapter: Adverse Health Effects of Noise.

<https://www.who.int/docstore/peh/noise/Comnoise-3.pdf>

World Health Organization Training Package for the Health Sector: Children and Noise, Children's Health and the Environment

<https://www.who.int/ceh/capacity/noise.pdf>