

10 NOISE ELEMENT

A. Introduction

Noise is defined as a sound or series of sounds that are considered to be invasive, irritating, objectionable, and/or disruptive to the quality of daily life. Noise varies in range and volume and can originate from individual incidents such as construction equipment, sporadic disturbances, such as car horns or train whistles, or more constant irritants, such as traffic along major arterials.

Section 65302(f) of the California Government Code requires that General Plans contain a Noise Element that can be used as a guide for establishing a pattern of land uses that minimizes the exposure of community residents to excessive noise. Local governments are required to analyze and quantify noise levels and the extent of noise exposure through field measurements or noise modeling, and implement measures and possible solutions to existing and foreseeable noise problems.

This section describes the existing noise environment in Los Gatos and is divided into the following sections:

- ◆ **Introduction:** A description of the scope, requirements, and contents of the Noise Element.
- ◆ **Noise Background and Terminology:** A description of noise issues, standards, and terminology used to describe noise.
- ◆ **Noise Standards:** A summary of outdoor noise limits established by Los Gatos.
- ◆ **Sources of Existing Noise:** A summary of the sources of noise, including stationary, non-stationary, and construction noise sources.
- ◆ **Future Noise Contours:** A description of projected noise conditions in Los Gatos at General Plan buildout.
- ◆ **Goals, Policies, and Actions:** A list of goal, policy, and action statements that are intended to mitigate and reduce noise impacts in Los Gatos.

B. Noise Background and Terminology

The Town is generally characterized as a quiet, residential community. This element identifies and evaluates unwanted noise sources in the Town, and establishes goals and policies for reducing noise levels in the Town. Policies aimed at reducing noise levels must address specific sources of unwanted noise, as well as noise-sensitive receptors. Noise level generation, intensity, and related impacts should be considered in determining the placement of housing, open space areas and other noise-sensitive land uses.

The State of California Office of Planning and Research Noise Element Guidelines (Guidelines) include recommended interior and exterior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. These Guidelines describe the compatibility of various land uses with a range of environmental noise levels in terms of dBA CNEL, as explained in Table NOI-1.

According to the State, a noise environment of 50 dBA CNEL to 60 dBA CNEL is considered to be “normally acceptable” for residential uses. Therefore, locating residential units, parks, and institutions (such as churches, schools, libraries, and hospitals) in areas where exterior ambient noise levels exceed 65 dBA CNEL is undesirable. Additionally, more restrictive standards for quiet suburban and rural communities may be reduced by 5 to 10 dB to reflect their lower existing outdoor noise levels in comparison with urban environments.

Title 25, Section 1092 of the California Code of Regulations also sets forth requirements for the insulation of multiple-family residential dwelling units from excessive and potentially harmful noise. Whenever multiple-family residential dwelling units are proposed in areas with excessive noise exposure, the developer must incorporate construction features into the building’s design that reduce interior noise levels to 45 dBA CNEL.

Figure NOI-1 illustrates the State guidelines established by the State Department of Health Services for acceptable noise levels for each jurisdiction.

NOI-2

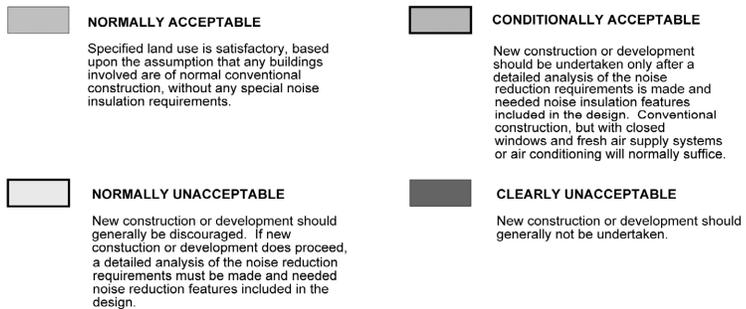
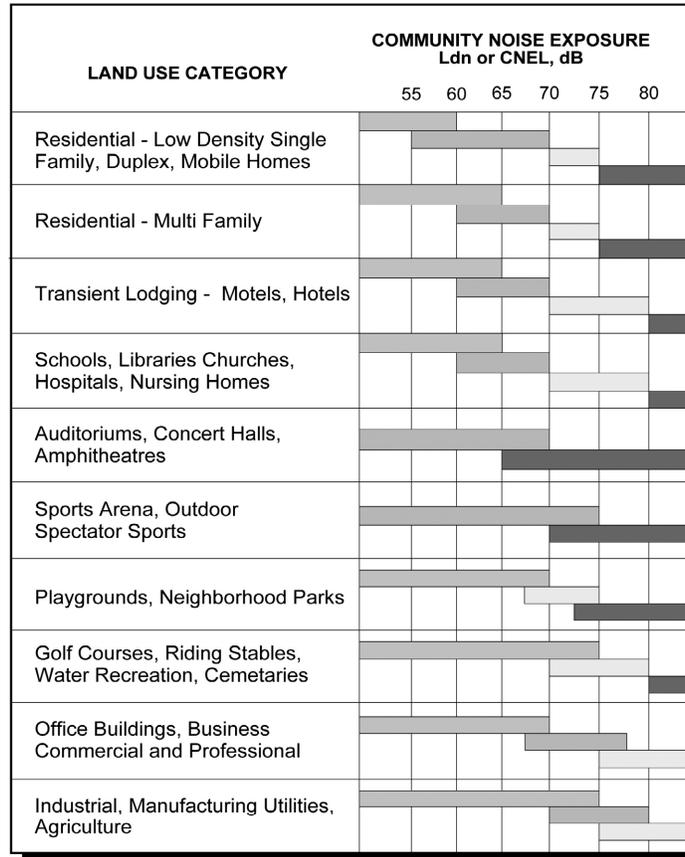
TABLE NOI-1 NOISE DESCRIPTORS

Term	Definition
Decibel (dB)	The unit for measuring the volume of sound equal to 10 times the logarithm (base 10) of the ratio of the pressure of a measured sound to a reference pressure (20 micropascals).
A-Weighted Decibel (dBA)	A sound measurement scale that adjusts the pressure of individual frequencies according to human sensitivities. The scale accounts for the fact that the region of highest sensitivity for the human ear is between 2,000 and 4,000 cycles per second (hertz).
Equivalent Sound Level (L_{eq})	The sound level containing the same total energy as a time varying signal over a given time period. The L_{eq} is the value that expresses the time averaged total energy of a fluctuating sound level.
Maximum Sound Level (L_{max})	The highest individual sound level (dBA) occurring over a given time period.
Minimum Sound Level (L_{min})	The lowest individual sound level (dBA) occurring over a given time period.
Community Noise Equivalent Level (CNEL)	A rating of community noise exposure to all sources of sound that differentiates between daytime, evening and nighttime noise exposure. These adjustments are +5 dBA for the evening, 7:00 p.m. to 10:00 p.m., and +10 dBA for the night, 10:00 p.m. to 7:00 a.m.
Day/Night Average (L_{dn})	The L_{dn} is a measure of the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure. It is based on a measure of the average noise level over a given time period called the L_{eq} . The L_{dn} is calculated by averaging the L_{eq} 's for each hour of the day at a given location after penalizing the "sleeping hours" (defined as 10:00 p.m. to 7:00 a.m.) by 10 dBA to account for the increased sensitivity of people to noises that occur at night.
L_{01} , L_{10} , L_{50} , L_{90}	The fast A-weighted noise levels equaled or exceeded by a fluctuating sound level for 1%, 10%, 50% and 90% of a stated time period.

Source: Cyril M. Harris, *Handbook of Noise Control*, 1979.

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Figure NOI-1 NOISE AND LAND USE COMPATIBILITY



Source: Office of Planning and Research, California, *General Plan Guidelines*, October 2003.

These standards and criteria are incorporated into the land use planning process to reduce future noise and land use incompatibilities. This figure helps the Town ensure integrated planning for compatibility between land uses and outdoor noise.

1. Noise Descriptors

Various methods have been developed for evaluating community noise, including: the variation of noise levels over time; the influence of periodic individual loud events; and the community response to changes in the community noise environment. Table NOI-1 lists various methods to measure sound over a period of time.

2. Health Effects

Human response to sound is highly individualized. Annoyance is the most common issue regarding community noise. The percentage of people claiming to be annoyed by noise generally increases with the environmental sound level. However, many factors also influence people's response to noise. The factors can include the noise character, variability of the sound level, presence of tones or impulses, and time of day of the occurrence.

Additionally, non-acoustical factors, such as a person's opinion of the noise source, ability to adapt to the noise, attitude toward the source and those noises associated with it, and predictability of the noise, all influence a person's response. As such, response to noise varies widely from one person to the next and with any particular noise, individual responses range from "not annoyed" to "highly annoyed." When the noise level of an activity rises above 70 dBA, the chance of receiving a complaint is possible. The effects of noise are often only transitory, but adverse effects can be cumulative with prolonged or repeated exposure.

The effects of noise on the community can include:

- ◆ Noise-induced hearing loss
- ◆ Interference with communication
- ◆ Sleep interference
- ◆ Dissatisfaction, complaints, and stress
- ◆ Annoyance

C. Noise Standards

Los Gatos has established outdoor noise limits, which represent long-range community goals for different land use designations within the town. These outdoor noise limits are shown in Table NOI-2. The Town of Los Gatos Municipal Code describes when and how construction activities may occur, with the goal of reducing any short-term impacts from construction noise.

D. Sources of Existing Noise

1. Stationary Noise Sources

Commercial and industrial land uses located near residential areas currently generate occasional noise impacts. The primary noise sources associated with these facilities are delivery trucks, air compressors, generators, outdoor loudspeakers and gas venting. Other significant stationary noise sources in the town include construction activities, street sweepers, and gas-powered leaf blowers. Airports, fire, police, hospitals, schools, and parks also generate occasional stationary noise impacts. Most of the noise impacts from these stationary sources are temporary and intermittent.

2. Non-Stationary Noise Sources

The noise environment in the Town is dominated by vehicular traffic, including traffic-generated noise along State Routes 17 and 85 as well as along major arterials. The major roadways that serve the Town and contribute to mobile noise are Blossom Hill Road, Lark Avenue, Los Gatos/Saratoga Road, Los Gatos Boulevard, and Winchester Boulevard.

3. Construction Noise

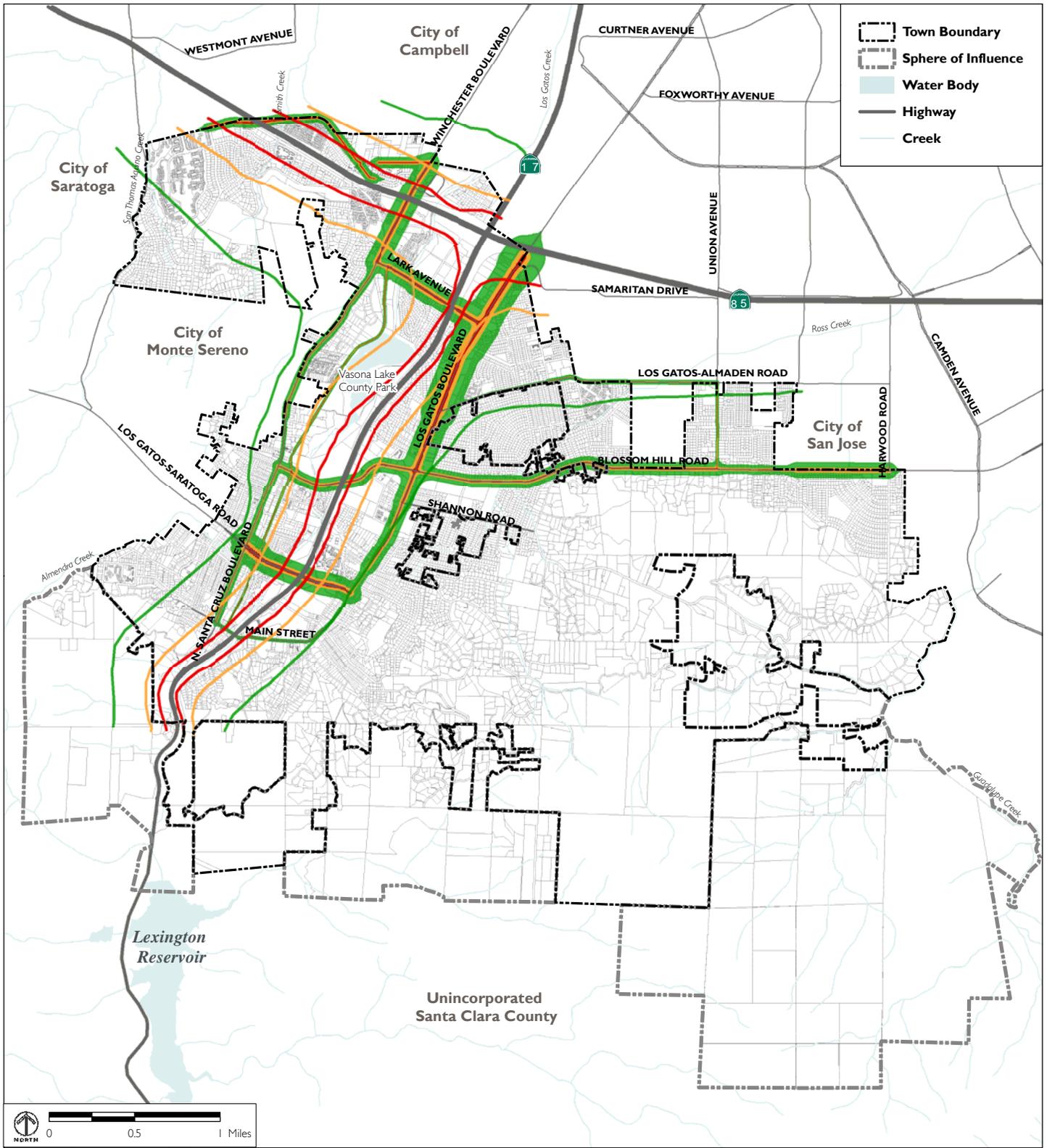
Typical activities associated with construction are highly noticeable temporary noise sources. Noise from construction activities are generated by two primary sources: (1) the transport of workers and equipment to construction sites; and (2) the noise related to active construction equipment. These noise sources can be a nuisance to local residents and businesses or unbearable to sensitive receptors.

TABLE NOI-2 OUTDOOR NOISE LIMITS

Land Use	Max. L _{dn} Value	Max. L _{eq} 24 Value	Comparable Noise Source	Response
Residential	55 dBA		Light auto traffic (100 feet)	Quiet
Commercial		70 dBA	Freeway traffic (50 feet)	Telephone use difficult
Industrial		70 dBA	Freeway traffic (50 feet)	Telephone use difficult
Open Space				
Intensive (Developed Park)		55 dBA	Light auto traffic (100 feet)	Quiet
Passive (Nature Park)		50 dBA	Light auto traffic (100 feet)	Quiet
Hospital		55 dBA	Light auto traffic (100 feet)	Quiet
Educational		55 dBA	Light auto traffic (100 feet)	Quiet

E. Future Noise Contours

The noise environment in Los Gatos is not expected to significantly increase as a result of the implementation of the 2020 General Plan. However, vehicular traffic noise, the dominant source throughout the town, would slightly increase as a result of additional traffic within the town along local streets and major through routes, including Highways 17 and 85. Sources of non-transportation noise are not anticipated to substantially increase in the community with implementation of the Town’s Noise Ordinance and the following goals, policies, and actions. Noise contours for projected conditions within Los Gatos at 2020 General Plan buildout are provided in Figure NOI-2 in terms of the Day-Night Average Level (L_{dn}).



Source: Town of Los Gatos; RBF Consulting; DC&E, 2010.

Highways	Local Roads
— 70 CNEL	■ 70 CNEL
— 65 CNEL	■ 65 CNEL
— 60 CNEL	■ 60 CNEL

FIGURE NOI-2
 FUTURE NOISE CONTOURS

F. Goals, Policies, and Actions

The following goal, policy, and action statements are intended to limit the exposure of the community to excessive noise levels.

Goal NOI-1	To ensure that noise from new development and new land uses does not adversely affect neighboring land uses.
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Policies

- Policy NOI-1.1 The Town, as part of the Environmental Review process, shall require applicants to submit an acoustical analysis of projects. All input related to noise levels shall use the adopted standard of measurement shown in Table NOI-2. Noise impacts of new development shall be evaluated in terms of any increase of the existing ambient noise levels and the potential for adverse noise and groundborne vibrations impacts on nearby or adjacent properties. The evaluation shall consider short-term construction noise and on-going operational noise.
- Policy NOI-1.2 The Town shall maintain the noise ordinance standards.
- Policy NOI-1.3 Employ the L_{dn} scale for the evaluation of outdoor noise for residential land uses and the L_{eq} scale for evaluation of outdoor noise for non-residential uses, as shown in Table NOI-2. Pursue the outdoor noise limits shown in Table NOI-2 as representing the long range community aspirations and work toward their accomplishment, even though some may be presently unattainable.
- Policy NOI-1.4 Apply the same indoor noise levels standards for single family residential uses and multi-family dwellings.

Actions

- Action NOI-1.1 Adopt a procedure for reviewing the noise impacts of any proposed development.
- Action NOI-1.2 Establish significance criteria for evaluating increases in ambient noise resulting from new development and evaluating the compatibility of new development with the existing noise environment.

Goal NOI-2	To ensure that proposed development is not adversely affected by existing noise levels.
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Policies

- Policy NOI-2.1 Evaluate the potential for existing ambient and/or intrusive noise to adversely affect new development.
- Policy NOI-2.2 Require all noise-sensitive developments adjacent to or within an area where noise levels exceed community aspirations to include a noise study and recommendation for reducing noise impact to an acceptable level.

Goal NOI-3	To ensure that roadway noise does not adversely affect land uses.
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Policies

- Policy NOI-3.1 Roads constructed or improved by the Town of Los Gatos shall meet Town of Los Gatos noise level standards or, in some situations, the Los Gatos Noise Ordinance, to the maximum extent feasible.
- Policy NOI-3.2 The Town shall take a proactive stance in cooperating with transportation agencies, including Caltrans and VTA,

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to reduce noise from existing and future facilities. Noise reduction strategies related to the design and location of all facilities will be considered.

- Policy NOI-3.3 Require that stringent noise control measures accompany construction of new County, State, and federal roads and highways, preferably by depressing them, but also by constructing sound walls and berms, by landscaping, and by soliciting funds to modify existing noise-sensitive buildings where appropriate.

Actions

- Action NOI-3.1 Conduct a study to identify traffic improvements that could be constructed or signal timing changes that could be made to improve traffic flows without increasing speed levels to reduce high noise levels created by traffic congestion.
- Action NOI-3.2 Periodically review traffic volumes and average speeds to ensure maximum effectiveness in reducing noise levels, especially adjacent to residential areas.
- Action NOI-3.3 Identify those areas adjacent to existing or proposed State Highways that presently need acoustical protection and request that the State construct noise attenuation walls as a noise-reducing measure.

Goal NOI-4 To ensure that equipment noise does not adversely affect land uses.

Policies

- Policy NOI-4.1 All purchases of noise-producing Town equipment shall be made with careful consideration given to the noise impact they will create.

Policy NOI-4.2 Services contracted or performed by the Town shall not cause undue noise problems.

Policy NOI-4.3 The Town shall continue to support legislation that encourages or requires reducing noise levels for machinery, motor vehicles, and other equipment that generates offensive noise.

Policy NOI-4.4 All Town-owned and operated equipment and equipment operated under contract with the Town shall contain adequate noise attenuation equipment.

Action

Action NOI-4.1 Study a ban on gardening equipment that may create adverse noise.

Goal NOI-5 To ensure that residential land uses are not adversely affected by noise.

Policies

Policy NOI-5.1 Protect residential areas from noise by requiring appropriate site and building design, sound walls, and landscaping and by the use of noise attenuating construction techniques and materials.

Policy NOI-5.2 For commercial and industrial developments adjacent to residential neighborhoods, additional restrictions beyond the Noise Ordinance may be applied to reduce noise intrusions in residential districts to an acceptable level.

Goal NOI-6 To ensure that sensitive receptors are not exposed to unacceptable noise levels.
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Policies

- Policy NOI-6.1 The Town shall not approve land use patterns and traffic patterns that expose sensitive land uses or sensitive noise receptors to unacceptable noise levels.
- Policy NOI-6.2 Review transportation improvement plans to ensure that noise-sensitive areas are not exposed to unacceptable noise levels.

Actions

- Action NOI-6.1 Amend the Town Code to require buffers or separation between noise-generating uses and noise sensitive uses. Examples of noise sensitive uses include, but are not limited to residences, hospitals, schools, libraries, and parks.

Goal NOI-7 To actively enforce noise standards.
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Policies

- Policy NOI-7.1 Enforce noise limits and monitor compliance with noise standards.
- Policy NOI-7.2 Regularly review data from both the public and private sector to update noise control procedures and programs.

Actions

- Action NOI-7.1 The Town shall establish a measurable program to reduce noise, including effective procedures to monitor noise and enforce noise reduction.
- Action NOI-7.2 The Town shall encourage all law enforcement agencies operating within the Town limits to enforce the State Vehicle Code noise standards.

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Action NOI-7.3 Any Environmental Review document prepared for the Town for a project that identifies noise factors shall relate the noise data to the Town's Noise Ordinance to give the Planning Commission and Town Council a standard for comparison.