
INTERSTATE
10
Indio
other Desert
Cities


*chapter eleven*

# NOISE

The purpose of the Noise Element is to minimize exposure to excessive noise which can adversely affect physical and psychological well-being, property values, the environment, and quality of life. As required by State law, local governments are required to quantify noise levels and exposure through analysis and noise modeling. This element evaluates community noise levels and establishes a land use pattern that is compatible with current and future noise sources. California law requires that a general plan include elements (or chapters) specifically addressing noise. This element was prepared to meet these requirements (Government Code Section 65302(f). The Noise Element must identify and appraise noise problems in the community from a variety of sources, establish a pattern of land use that minimizes exposure of residents to excessive noise, and include possible solutions to address existing and foreseeable noise problems.

# Key Considerations and Strategies

Noise is usually defined as an unwanted sound. Excessive levels of noise can interfere with sleep, work, and quality of life. It can even cause physiological or psychological damage. The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important. In addition, most noise that lasts for more than a few seconds is variable in its intensity. At excessive levels, people typically perceive noise as being intrusive, annoying, and undesirable.

Noise-sensitive receptors are land uses that tend to be more impacted by noise than others. Examples of such land uses include residential dwellings, hotels, hospitals, nursing homes, educational facilities, libraries, and biological open space. Excessive noise can interfere with human activities in these locations, such as talking, reading, and sleeping. Animal species and their habitats may also be affected by noise, especially during their breeding season.

Many potential noise impacts can be addressed through the design of our buildings and public spaces. How buildings are designed, how land uses are arranged, and how our roads are designed and operated all contribute to the ambient noise levels in our community. The most efficient and effective way to minimize noise impacts is at the time of project design through the use of strategies that reduce the noise levels generated such as through the use of mufflers on stationary equipment and reducing traffic speeds, protect receptors from noise such as through the use of sound walls along roads, managing the time frame of noise generation such as through the use of operating hours, and reducing noise exposure by separating activities through the use of setbacks.

*Traffic in Indio contributes to noise levels.*

# Context

Transportation, including roadways, rail, and the Bermuda Dunes Airport, represents the most dominant source of noise in Indio. Figure 11-1 identifies the existing roadway transportation noise contours throughout Indio. The most significant roadway noise is generated from motor vehicles travelling along I-10, SR-86, and Highway 111. Other major sources of transportation noise are railroad activity from the Union Pacific rail line that runs adjacent to Indio Boulevard and airport activity from the Bermuda Dunes Airport. The Bermuda Dunes Airport Noise Contours are shown Figure 11-2.

Festivals and special events also generate a significant amount of noise in Indio. The City established the Major Music Festival Overlay Zone around the Festival District in order to monitor and adjust noise levels during major festivals. Other noise sources in Indio are manufacturing and industrial operations, agricultural operations, air conditioning and other mechanical equipment, landscaping equipment, and human speech.

## Noise and Land Use Compatibility Matrix

Indio has established noise / land use compatibility guidelines. The noise / land use compatibility guidelines are a planning tool that establishes criteria for the acceptable total noise levels to which land uses are exposed. Proposed developments are assessed for conformance with the noise land use compatibility guidelines.

Table 11-1 displays these guidelines, which are based on Community Noise Equivalent Level (CNEL). CNEL averages noise levels over a 24-hour period and is weighted to recognize that sounds appear louder during the quiet evening and nighttime hours when ambient noise levels are lower. The CNEL scale identifies the acceptable ranges of noise for a various land uses ranging from single-family residential to industrial and manufacturing uses. As shown in Table 11-1, acceptable noise levels increase as the sensitivity of the land use decreases.

Once land uses are established, noise levels are regulated through the City's noise ordinance (Chapter 95C of the Municipal Code), which establishes hourly noise level limits and enforcement procedures to restrict noise from individual noise generators.

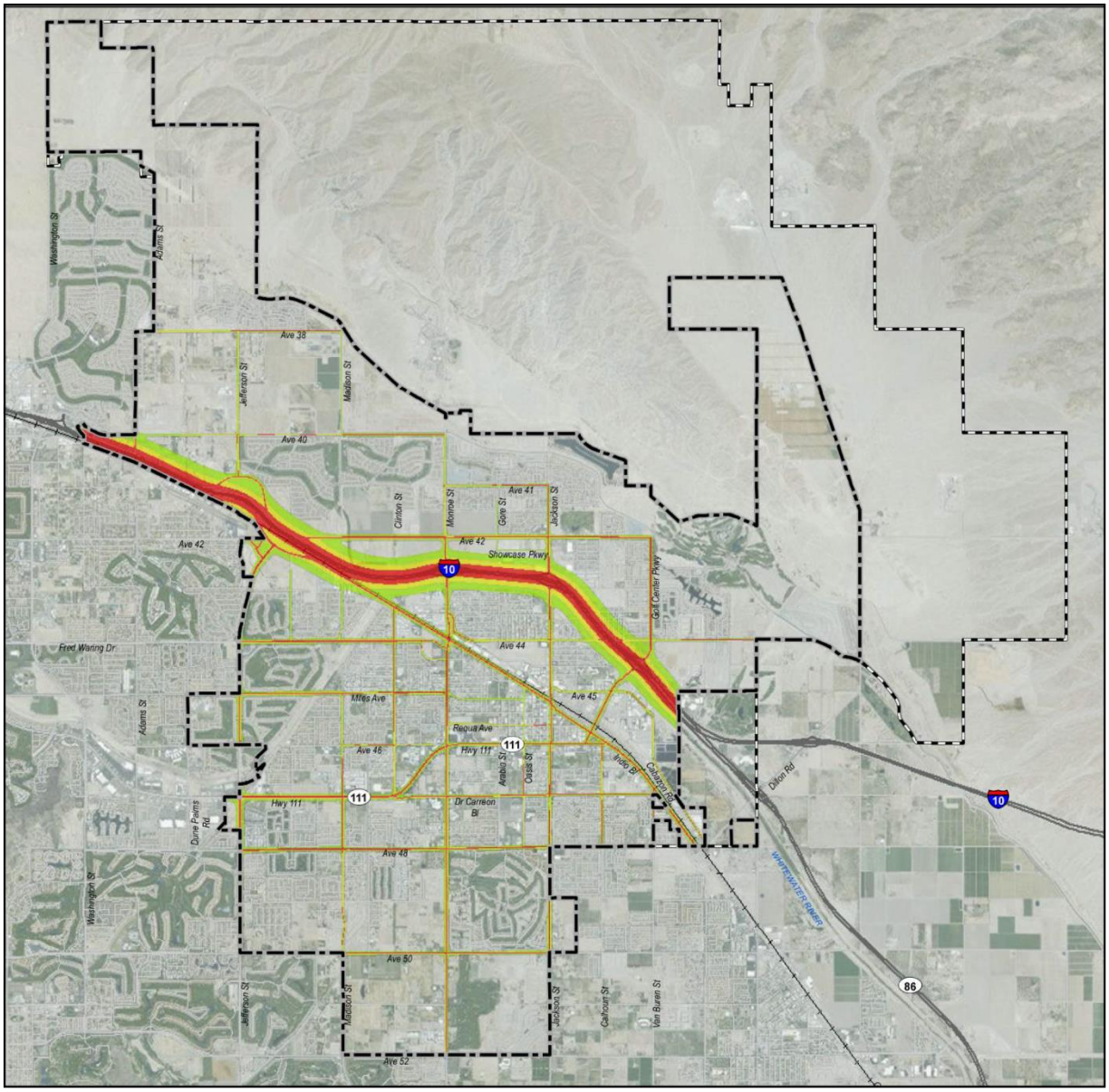
Coordination of the guidelines and the noise ordinance is essential to reducing noise impacts. The guidelines reduce the burden of enforcement through preemptive measures and also address noise sources, such as traffic noise, which cannot be restricted after land uses are established. The noise ordinance provides continued monitoring to ensure actual and planned noise levels are consistent. This includes regulation of nuisance noise sources that cannot be planned for and noise that would be considered acceptable during daytime hours and disruptive during nighttime hours.

## Table 11-1: Noise Compatibility Guidelines

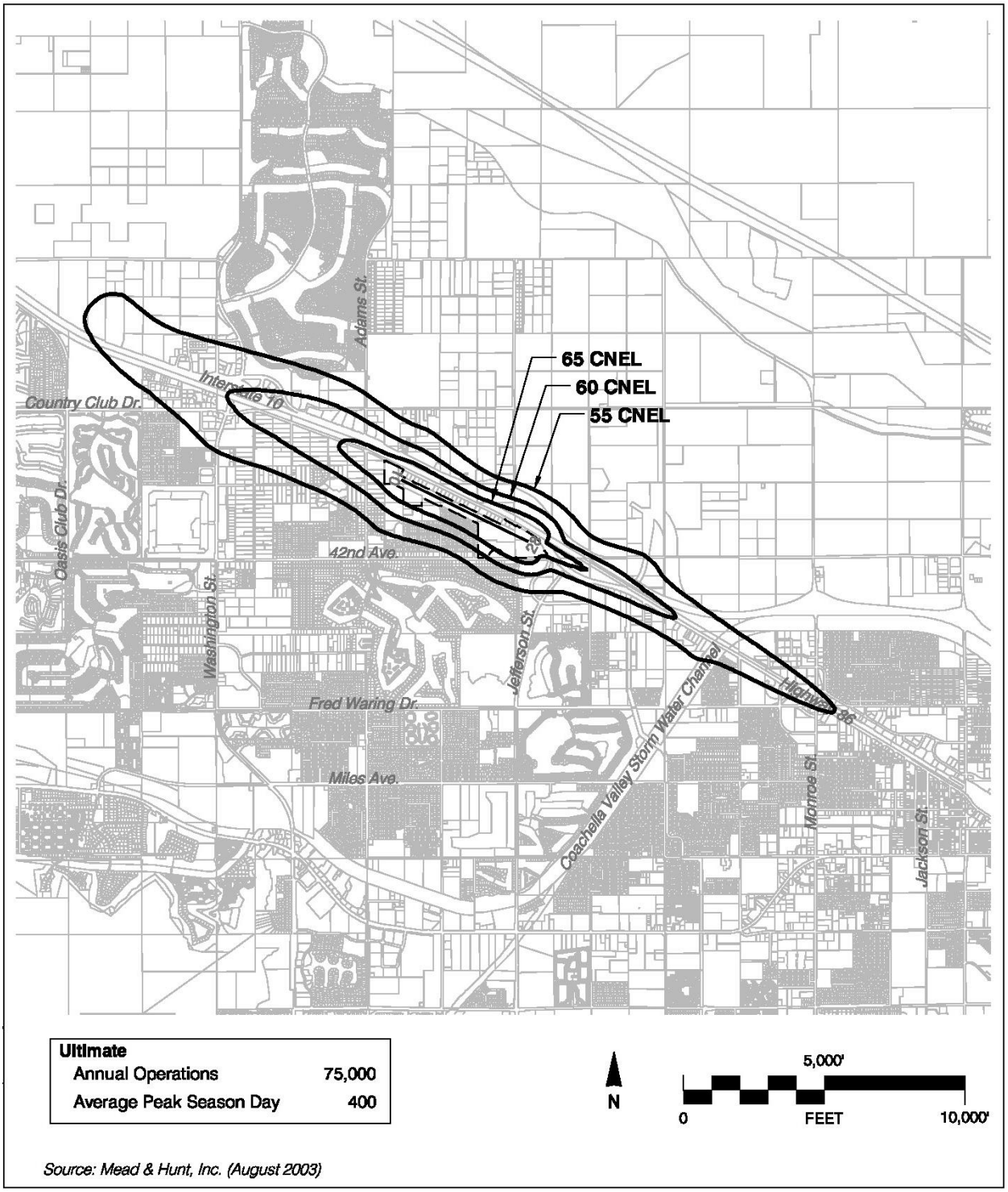
| Land Use Category | | Exterior Noise Level (CNEL) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 50 | 55 | 60 | 65 | 70 | 75 | 80 |
| A | Residential – single family residences, mobile homes, senior housing, convalescent homes | | | | | | | |
| B | Residential – multi-family residences, mixed-use (commercial/residential) | | | | | | | |
| C | Transient lodging – motels, hotels, resorts | | | | | | | |
| D* | Schools, churches, hospitals, nursing homes, child care facilities | | | | | | | |
| E* | Passive recreational parks, nature preserves, contemplative spaces, cemeteries | | | | | | | |
| F* | Active parks, golf courses, athletic fields, outdoor spectator sports, water recreation | | | | | | | |
| G* | Office/professional, government, medical/dental, commercial, retail, laboratories | | | | | | | |
| H* | Industrial, manufacturing, utilities, agriculture, mining, stables, ranching, warehouse, maintenance/repair | | | | | | | |

| | |
|---|---|
| | ACCEPTABLE – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal construction, without any special noise insulation requirements. |
| | CONDITIONALLY ACCEPTABLE – New construction or development should be undertaken only after a detailed noise analysis is conducted to determine if noise reduction measures are necessary to achieve acceptable levels for land use. Criteria for determining exterior and interior noise levels are listed in Table N-2, Noise Standards. If a project cannot mitigate noise to a level deemed Acceptable, the appropriate county decision-maker must determine that mitigation has been provided to the greatest extent practicable or that extraordinary circumstances exist. |
| | UNACCEPTABLE – New construction or development shall not be undertaken. |

## Figure 11-1: Existing Transportation Noise Contours (Non-Airport)



## Figure 11-2: Bermuda Dunes Airport Noise Contours



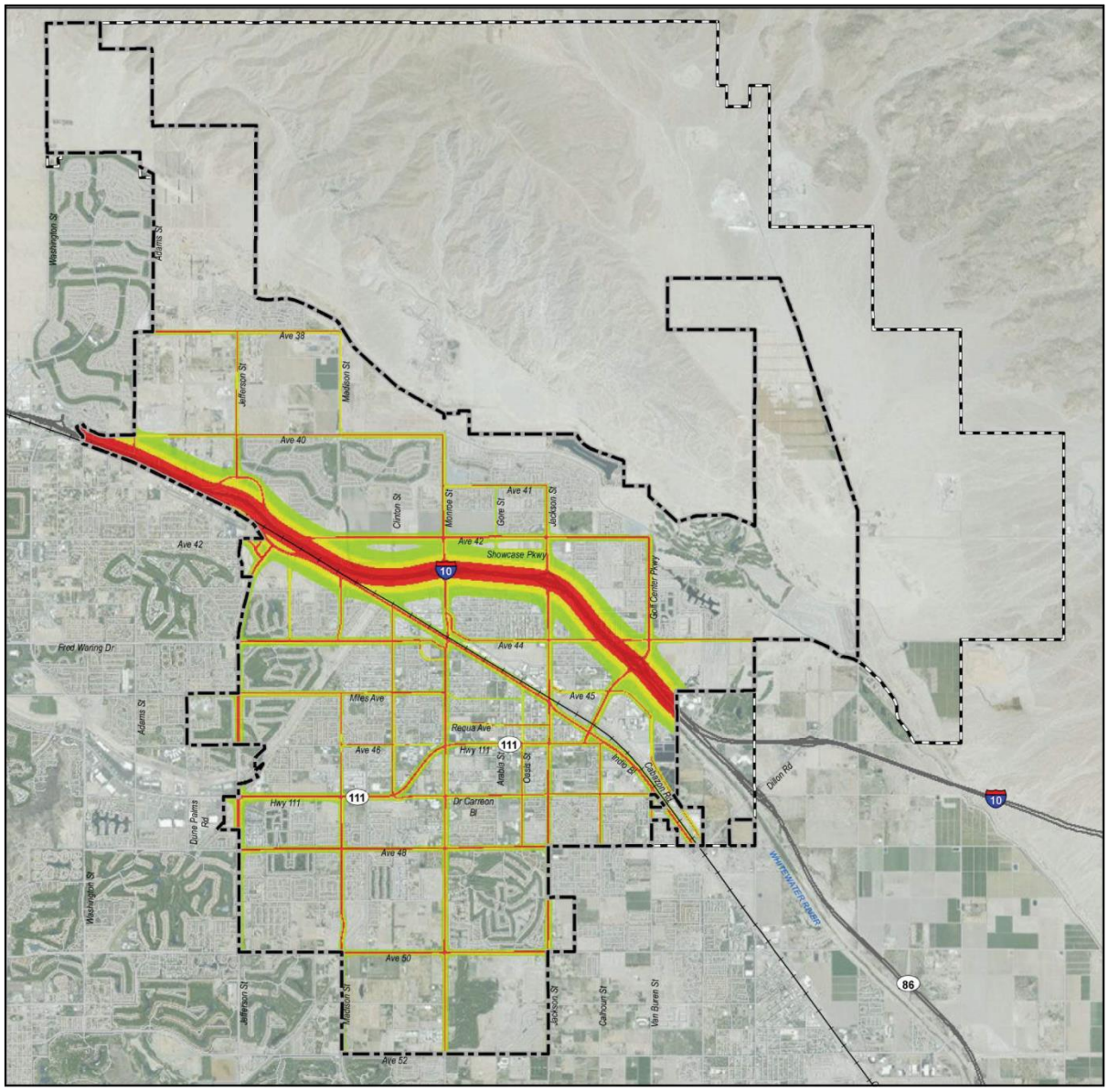

*Source: Mead & Hunt, Inc. (August 2003)*

## Future Noise Conditions

Future conditions from most noise sources would remain substantially similar to existing conditions. Railway operation and aircraft overflights would have limited increases in operational frequency. As Indio grows, temporary noise sources, such as construction activities and special events, may increase in frequency; however, there would be no fundamental change in the nature of these sources and existing regulation under the noise ordinance would continue. Stationary sources of noise associated with land uses, such as landscaping equipment, air conditioning units, and other mechanical equipment would be associated with new developments; however, these sources would be substantially similar to existing uses.

Indio's most dominant source of noise, traffic noise, would increase with future development in Indio. Noise from freeway segments adjacent to Indio including I-10 and SR-86 would increase by an average 3 dB(A). Noise from local surface streets including major thoroughfares and minor collectors would increase by an average of 2 to 3 dB(A). Although traffic noise increases would occur throughout the community, increases would be exaggerated on certain roadways. Roadways subject to a readily perceptible (5 dB[A] or greater) increase in noise levels include segments of Avenue 38, Avenue 40, Burr Street, Madison Street, Oasis Street, Dillon Road, Avenue 44, Avenue 48, Avenue 50, and Avenue 52. Figure 11-3 shows future noise contours.

## Figure 11-3: Projected Future Transportation Noise Contours (Non-Airport)




# Projected Noise Contours

0 0.5 1 2
Miles

City Boundary

Sphere of Influence

Roads

Railroads

Highways

**Projected Noise Contours**

60-65 CNEL

65-70 CNEL

70+ CNEL

Source: Riverside County/LAFCO ( City Boundary,2012; SOI,2012) Riverside County/TLMA (Roads,Railroads,Highways) Riverside County (River)

The information on this map was derived from various digital databases, sourced above. Care was taken in the creation of this map but it is provided "as is". PDC cannot accept any responsibility for any errors, omissions, or positional accuracy, and therefore, there are no warranties which accompany this product. Users are cautioned to field verify information on this product before making any decisions.

# Goals and Policies

## Noise Compatibility

Establishing noise/land use compatibility guidelines helps to prevent and/or minimize adverse or undesirable noise impacts. Noise can cause stress, disrupt sleep, and cause health and auditory problems. For the well-being of the community, land use planning is important to avoid excessive noise levels.

### Goal NE-1: Land Use Compatibility. A City where noise exposure is minimized for those living, working, and visiting the community.

### NE-1 Policies

**NE-1.1 Sensitive receptors.** Protect noise-sensitive uses, such as residences, schools, health care facilities, hotels, libraries, and churches, from excessive noise levels through land use capability / adjacency, build design, and noise ordinance enforcement.

**NE-1.2 Noise compatibility.** Apply the Noise Compatibility Matrix, shown in Table 11-1, as a guide for planning and development decisions. The City will require projects involving new development or modifications to existing development to implement mitigation measures, where necessary, to reduce noise levels to at least the normally compatible range shown in the City's Noise Compatibility Matrix shown in Table 11-1. Mitigation measures should focus on architectural features and building design and construction, rather than site design features, such as excessive setbacks, berms, and sound walls, to maintain compatibility with adjacent and surrounding uses.

**NE-1.3 Airport land use planning.** Implement all applicable noise-related policies contained in the Bermuda Dunes Airport Land Use Plan.

**NE-1.4 Major music festival overlay zone.** Ensure implementation, monitoring, and enforcement of noise standards within the Major Music Festival Overlay Zone.

**NE-1.5 Special events.** In conjunction with permitting for special events, such as concerts and festivals, permit variances to allow such uses to temporarily exceed the maximum allowable decibel level while minimizing noise impacts to surrounding uses to the extent feasible.

**NE-1.6 Limit on hours of operation.** Limit delivery or service hours for stores and businesses with loading areas, docks, or trash bins that front, side, border, or gain access on driveways next to residential and other noise sensitive areas, such as residences, schools, hospitals, religious meeting spaces, and recreation areas.

**NE-1.7 Land use and community design.** Prioritize the building design and character policies in the Land Use and Community Character Element over those in the Noise Element to ensure that new development meets the design vision of the city. This policy will not apply when noise levels are clearly in the incompatible range as shown in the City's Noise Compatibility Matrix shown in Table 11-1.

## Noise Sources

The City will implement noise reducing measures, such as appropriate setbacks and/or noise barriers to minimize impacts to adjacent land uses from mobile and stationary sources.

### Goal NE-2: Mobile Noise Sources. A City with minimal mobile source-generated noise levels.

### NE-2 Policies

**NE-2.1 Freeway noise**. Work with Caltrans and the Federal Highway Administration to reduce noise impacts to sensitive receptors along I-10.

**NE-2.2 Truck routes.** Regulate traffic flow to enforce speed limits to reduce traffic noise. Periodically evaluate and enforce established truck and bus routes to avoid noise impacts on sensitive receptors.

**NE-2.3 Railway noise.** Ensure that noise and vibration from rail lines is taken into account during the land use planning and site development processes.

**NE-2.4 Roadway noise.** Implement the policies listed under Goal 1 to reduce the impacts of roadway noise on noise-sensitive receptors where roadway noise exceeds the normally compatible range shown in the City's Noise Compatibility Matrix shown in Table 11-1.

**NE-2.5 Traffic calming.** Require the use of traffic calming measures such as reduced speed limits or roadway design features to reduce noise levels where roadway noise exceeds the normally compatible range shown in the City's Noise Compatibility Matrix shown in Table 11-1.

**NE-2.6 Noise-reducing paving.** Encourage the use of noise-reducing paving materials, such as open-grade or rubberized asphalt, for public and private road surfacing projects in proximity to existing and proposed residential land uses.

**NE-2.7 City fleet.** Consider the noise effects of City purchases and or leases of vehicles and other noise generating equipment. Take reasonable and feasible actions to reduce the noise generated from City-owned or leased vehicles and equipment, where possible.

### Goal NE-3: Stationary Noise Sources. A City with minimal stationary source-generated noise levels.

### NE-3 Policies

**NE-3.1 Noise ordinance.** Minimize noise conflicts between neighboring properties through enforcement of applicable regulations, such as the City's Noise Control Ordinance.

**NE-3.2 Noise complaints.** Respond timely to noise complaints and conduct field monitoring compliance checks to regulate noise violators.

**NE-3.3 Entertainment uses.** Require noise generating uses, such as restaurants, bars, entertainment venues, and industrial manufacturing operations to minimize noise impacts on adjacent noise-sensitive receptors when there is a potential for adverse noise impacts to occur.

**NE-3.4 Construction noise.** Require development to minimize the exposure of neighboring properties to excessive noise levels from construction-related activity during all phases of construction.

# Implementation Actions

The table below identifies programs, policy updates, planning efforts, coordination efforts, and other actions that will help implement the General Plan's noise sources and compatibility. Programs are consistent with this chapter's goals and policies.

### Table 11-2: Noise Programs

| | DESCRIPTION | PRIORITY | TIME FRAME | RESPONSIBILITY |
|---|---|---|---|---|
| 1 | **Special events noise mitigation program.** Continue to monitor Special Events noise levels and seeks ways to mitigate for least neighborhood disruption, including in the Major Music Festival Overlay Zone. | High | Ongoing | Planning, Public Works |
| 2 | **Noise ordinance**. Amend the noise ordinance to include day and nighttime noise level limits and to specifically protect noise sensitive land uses during overnight hours. | High | Short | Planning |
| 3 | **Airport overlay**. Adopt an overlay zone, as part of the Noise Ordinance or separately, for lands that fall within the airport influence area of the Bermuda Dunes Airport. | Medium | Medium | Planning |
| 4 | **Construction noise limits**. Review the hours of allowed construction activity to ensure they effectively lead to compliance within the limits (maximum noise levels, hours and days of allowed activity) established in the City's noise regulations. | Medium | Short | Planning |
| 5 | **Noise studies**. Require submittal of applicable technical reports prepared by qualified professionals as part of the development review process. Depending on the location, size, or type of development proposed, technical reports could be required, including a noise impact analysis. | High | Ongoing | Planning |