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# NOISE ELEMENT

E L C E N T R O G E N E R A L P L A N

## INTRODUCTION

The quality of life experienced by residents of El Centro is affected by the levels of noise within the City. In addition to causing irritation, high noise levels can be a source of stress for those residing and working nearby. Creating effective strategies that reduce excessive noise and limit the community's exposure to loud noise sources is central to the Noise Element.

### **Purpose of the Noise Element**

The Noise Element identifies sources of noise in the community and ways to reduce the impacts of these noise sources on the community. Contained in the Element are policies and programs to achieve and maintain noise levels compatible with various land uses. Additionally, the Noise Element identifies those land uses sensitive to noise and assures that noise generating land uses are located so as to minimize impact to those sensitive areas.

### **Scope and Content of the Noise Element**

The Noise Element satisfies the requirements of State planning law and is a mandated component of the General Plan. Government Code Section 65302(f) establishes the required components of the Noise Element. The Element also complies with California Health and Safety Code Section 56050.1 guidelines for Noise Elements.

Noise exposure contours represent quantified projections of future noise conditions from short- and long-term growth. This noise information serves as the basis to develop guidelines for compatible uses.

The Noise Element is comprised of three sections: 1) Introduction; 2) Issues, Goals and Policies; and 3) the Noise Plan. In the second section (Issues, Goals and Policies), major issues pertaining to noise sources are identified and related goals and policies are established. The goals reflect the overall desires of the City and comprise broad statements of purpose and direction. The policies are guidelines aimed to reduce or avoid adverse noise effects on residents. The Plan describes how the goals and policies will be achieved and implemented. Specific implementation programs

for the Noise Element are contained in the General Plan Implementation Program, which comprises Appendix A.

## **Related Plans and Programs**

A number of plans and programs directly relating to the goals of the Noise Element are in existence. These plans and programs have been enacted through State and local legislation and are administered by agencies with powers to enforce State and local laws.

### ***California Environmental Quality Act (CEQA) and Guidelines***

The California Environmental Quality Act (CEQA) was adopted by the State legislature in response to a public mandate for thorough environmental analysis of projects that might affect the environment. Excessive noise is considered an environmental impact under CEQA. The provisions of the law and environmental review procedure are described in the CEQA Statutes and the CEQA Guidelines. Implementation of CEQA ensures that during the decision making stage of development, City officials and the general public will be able to assess the environmental impacts associated with private and public development projects to the environment.

### ***California Noise Insulation Standards (Title 24)***

The California Commission of Housing and Community Development officially adopted noise insulation standards in 1974. In 1988, the Building Standards Commission approved revisions to the standards (Title 24, Part 2, California Code of Regulations). As revised, the Title 24 establishes an interior noise standard of 45 dB(A) for residential space (CNEL or Ldn). Acoustical studies must be prepared for residential structures to be located within noise contours of 60 dB(A) or greater (CNEL or Ldn) from freeways, major streets, thoroughfares, rail lines, rapid transit lines, or industrial noise sources. The studies must demonstrate that the building is designed to reduce interior noise to 45 dB(A) or lower (CNEL or Ldn).

### ***City of El Centro Zoning Ordinance***

The City's Zoning Ordinance provides controls for excessive and annoying noise from a variety of sources. Maximum hourly average sound levels (measured in decibels) have been established for each land use designation and these levels vary by time of day. Noise regulations identified in the Zoning Ordinance are discussed in this Element.

## **Relationship to Other General Plan Elements**

State planning law requires that the Noise Element be consistent with the other General Plan elements. Although independent, each element in the General Plan is interrelated to a degree; and certain goals and policies of the individual elements may

also address issues that are primary subjects of other elements. The integration of overlapping issues throughout the General Plan elements provides a strong basis for implementation of plans and programs, and achievement of community goals. The Land Use and Circulation Elements are closely related to the Noise Element.

Noise Element policies and plans are designed to protect the existing and planned land uses identified in the Land Use Element from excessive noise. Potential noise sources are identified in the Noise Element and programs are established to avoid or mitigate noise impacts from planned development. At the same time, the Land Use Element contains policies to ensure that environmental conditions, including noise, are considered in all land use decisions. Preventing the intrusion of incompatible land uses in order to create a healthy environment is a central goal of the Land Use Element.

The transportation policies found in the Circulation Element are directly linked to the programs and policies developed in the Noise Element. Noise from transportation is largely responsible for excessive noise levels in certain locations in urban environments. Projected noise distribution identified in the Noise Element is corollary to the Circulation Plan. Policies and plans contained in the Noise Element are based on the Circulation Element and are aimed to minimize the effects of transportation noise on existing and planned land uses. Noise exposure will be a key consideration when locating and designing new arterials.

The Conservation & Open Space Element is also related to the Noise Element. The intended enjoyment of parks and open space can be diminished by excessive noise, and noise information should be considered in planning new recreational areas. Open space areas can also be used to buffer noise sensitive land uses from noise producers.



## ISSUES, GOALS, AND POLICIES

El Centro's quality of life can be reduced by excessive noise levels. The goals, policies and implementation actions of the Noise Element address three major issues related to noise. These include: (1) avoiding the negative effects from noise through the use of land use planning and noise reduction techniques; (2) minimizing the impact of transportation-related noise; and (3) minimizing the impact of non-transportation related noise.

### Noise and Land Use Planning

High noise levels tend to concentrate in certain areas within the City of El Centro. Consideration of the sources and recipients of noise early in the land use planning process can be an effective method of minimizing the impact of noise on population in the community. Rehabilitative improvements are necessary to reduce the effects of noise in areas currently impacted by noise.

**Noise Goal 1:** Minimize the effects of noise through proper land use planning.

**Policy 1.1:** Use noise/land use compatibility standards as a guide for future planning and development decisions.

**Policy 1.2:** Provide noise control measures and sound attenuating construction in areas of new construction or rehabilitation.

**Policy 1.3:** Promote alternative sound attenuation measures, such as berms, embankments, landscaping, setbacks, and architectural design where appropriate, rather than wall barriers.

**Policy 1.4:** Support changes in the Uniform Building Code that incorporate new technologies for reducing exterior noise intrusion into structures and the transmission of interior-generated noise within structures.

### Transportation Related Noise

Transportation related noise is the primary source of noise impacting the City of El Centro. Both Interstate 8 and the Union Pacific and San Diego & Arizona railroads, along with other major roadways, create high noise levels that affect the overall quality of life in the community. Reducing transportation related noise is necessary to off-set detrimental affects attributable to excessive noise.

**Noise Goal 2:** Minimize transportation related noise impacts to preserve the City's overall environment.

**Policy 2.1:** Reduce transportation related noise impacts to sensitive land uses through the use of noise control measures.

**Policy 2.2:** Establish and maintain truck routes away from noise sensitive receptors.

**Policy 2.3:** Incorporate sound-reduction design in development projects impacted by transportation related noise.

**Policy 2.4:** Enforce motor vehicle laws and standards, as allowed by federal and State law, related to traffic flow and speed and vehicle equipment standards to control noise along City roadways.

**Policy 2.5:** Continue to monitor noise levels of railroad operations and work with railway operators to minimize noise generated by rail operations.

**Policy 2.6:** Require solid masonry walls to be installed at the time of new construction of a new dwelling unit (or units) along the side or rear property lines or lines adjacent to any operational railroad right-of-way.

**Policy 2.7:** Continue to participate in the airport land use plan revisions for existing airport facilities and operations, future airports, and airport expansions to ensure that appropriate noise mitigation measures are implemented.

## **Non-Transportation Related Noise**

Noise sources such as construction noise, manufacturing or business operations noise, and property maintenance activities should be controlled to minimize exposure to excessive noise levels.

**Noise Goal 3:** Minimize non-transportation related noise impacts to preserve the City’s overall environment.

**Policy 3.1:** Reduce the impacts of noise producing land uses and activities on noise sensitive land uses.

**Policy 3.2:** Incorporate sound-reduction design in new construction or rehabilitation projects impacted by non-transportation related noise.

**Policy 3.3:** Require mitigation measures to ensure that noise resulting from public and private construction projects is reduced to an acceptable level.

## **Related Goals and Policies**

The goals and policies found in the Noise Element are related to and support subjects included in other General Plan elements. Likewise, many goals and policies from other elements are supportive of the subjects included in the Noise Element. These supporting goals and policies are identified in Table N-1.

**Table N-1  
Related Goals and Policies by Element**

General Plan Elements	Noise Issue Area		
	Noise and Land Use Planning	Transportation Related Noise	Non-Transportation Related Noise
Land Use	1.1,1.2,1.11	2.4	
Economic Development			1.5
Housing	n/a	n/a	n/a
Circulation	1.1, 4.2	4.2	
Public Facilities			
Conservation/Open Space	3.4		3.2
Safety	5.5	5.1,5.4	
Noise			



## NOISE PLAN

Like most urbanizing areas, El Centro is experiencing increased noise levels associated with transportation and non-transportation related sources. The City must seek ways to safeguard the community from excessive noise levels as the ambient noise level in the community rises. Goals and policies listed in the previous section establish an agenda for the reduction of the overall noise levels within the City. The Noise Plan describes the approach for achieving the agenda and provides a general outline of action programs. Contained in Appendix A of this General Plan, the Noise Element Implementation Program is an extension of the Noise Plan and contains specific programs that the City will enact to protect the overall quality of life in the community.

### **Noise and Land Use Planning**

The cumulative effect of noise from transportation activities and stationary sources contributes to the overall noise environment of a planning area. Noise generated from automobile use, trucking, airport and rail operations are referred to as transportation related noise. Non-transportation noise typically refers to noise from stationary sources such as commercial establishments, machinery, air conditioning systems, compressors and landscape maintenance equipment. Noise levels are highest near the source and decrease with distance. Noise is problematic when noise sensitive land uses are affected. A noise sensitive land use is one in which normal activities associated with the use may be interrupted by noise, including, but not limited to, residences, schools, hospitals, religious meetings and recreational areas. Consideration of noise sources, sensitive land uses, and information regarding the future noise environment is an effective way to avoid noise impacts.

### **Noise Standards and Land Use Compatibility Guidelines**

The City uses land use compatibility standards when planning and making development decisions in order to ensure that noise producers do not adversely affect sensitive receptors. Table N-2 summarizes City noise standards for various types of land uses. The standards represent the maximum acceptable noise levels and are used to determine noise impacts.

**Table N-2  
Noise Standards**

Zones	One Hour Average Sound Level (decibels)	
	Outdoor	Indoor*
Rural and Single-Family Residential Zones	60	45
Multi-Family Residential Zones	65	45
Schools, libraries, churches, hospitals, nursing homes, and parks and recreation areas	70	45

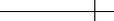
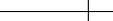
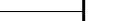
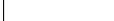
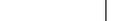
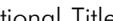
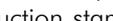
\* In the event that outdoor acceptable noise exposure levels cannot be mitigated by various attenuation mitigation measures, indoor noise levels shall not exceed 45 dB(A) CNEL.

These noise standards are the basis for development of the land use compatibility guidelines presented in Table N-3. If the noise level of a project falls within Zone A or Zone B, the project is considered compatible with the noise environment. Zone A implies that no mitigation will be needed. Zone B implies that minor mitigation may be required to meet the City’s and Title 24 noise standards. All development project proponents are required to demonstrate that the noise standards will be met prior to human occupation of a building.

If the noise level falls within Zone C, substantial mitigation is likely needed to meet City noise standards. Substantial mitigation may involve construction of noise barriers and substantial building sound insulation. Projects in Zone C can be successfully mitigated; however, project proponents with a project in Zone C must demonstrate that the noise standards can be met prior to issuance of a building permit.

If noise levels fall outside of Zones A, B and C, projects are considered clearly incompatible with the noise environment and should not be approved.

**Table N-3  
Noise/Land Use Compatibility Matrix**

Land Use	Community Noise Exposure (Ldn or CNEL)						
	50	55	60	65	70	75	80
Residential							
							
							
Transient Lodging – Motel, Hotel							
							
							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
							
							
Auditoriums, Concert Halls, Amphitheaters							
							
							
Sports Arena, Outdoor Spectator Sports							
							
							
Playgrounds, Parks							
							
							
Golf Course, Riding Stables, Water Recreation, Cemeteries							
							
							
Office Buildings, Business Commercial, and Professional							
							
							
Industrial, Manufacturing, Utilities, Agriculture							
							
							

Source: Modified by CBA from 1998 State of California General Plan Guidelines.

 **ZONE A - Normally Acceptable:** Specified land use is satisfactory, based upon the assumption that any buildings involved meet conventional Title 24 construction standards. No special noise insulation requirements.

 **ZONE B - Conditionally Acceptable:** New construction or development shall be undertaken only after a detailed noise analysis is made and noise reduction measures are identified and included in the project design.

 **Zone C- Normally Unacceptable:** New construction or development is discouraged. If new construction is proposed, a detailed analysis is required, noise reduction measures must be identified, and noise insulation features included in the design.

 **ZONE D- Clearly Unacceptable:** New construction or development clearly should not be undertaken.

## **Noise Contours and Noise Impact Areas**

The use of noise contours based on the major noise sources can describe the noise environment for the community. Noise contours outline areas of equal noise exposure. Future noise contours have been estimated with information about existing and projected land use development and transportation activity.

The projected noise contours and noise impact areas for El Centro are displayed in Figure N-1. These contours will serve as a guide for land use and development decisions. Contours of 60 dB(A) or greater define noise impact areas. An acoustical analysis must be prepared when noise sensitive land uses are proposed within noise impact areas. The analysis must show that the project is designed to attenuate noise to meet the City's noise standards as defined in Table N-2 in order to receive approval. If the project design does not meet the noise standards, mitigation can be recommended in the analysis. If the analysis demonstrates that the noise standards can be met by implementing the mitigation measures, the project can be approved conditioned upon implementation of the mitigation measures.

## **Construction Standards**

The provisions of the State Noise Insulation Standards (Title 24) will be enforced in El Centro. Title 24 specifies that combined indoor noise for multi-family living spaces shall not exceed 45 dB(A) CNEL. This standard must be implemented when the outdoor noise level exceeds 60 dB(A) CNEL. The future noise contour map (Figure N-1) can be used to determine the appropriate time to implement this standard. Title 24 requires that the standard be applied to all new hotels, motels, apartments and multi-family development.

## **Transportation-Related Noise**

Noise generated by transportation activity is the central component of El Centro's noise environment. Transportation noise is primarily concentrated along the transportation corridors that traverse the community (such as Interstate 8, State Route 80, major arterials and collector roads, the Union Pacific and San Diego & Arizona railroads, and aircraft flight patterns). A small portion of northern El Centro falls within the 55 CNEL noise contour of the Imperial County Airport Noise Impact Area (Figure N-2). The private airstrip located in the eastern portion of the City also generates aircraft noise that impacts surrounding land uses. Reducing noise at the source is the most efficient and effective way to control noise from transportation systems.

FIGURE N-1  
Future Noise Contours

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Figure N-2  
Imperial County Airport Noise Impact Area

The City of El Centro has little direct control over noise produced by transportation sources because State and federal noise regulations preempt local regulations. The State is responsible for regulating motor vehicle noise, while the federal government regulates aircraft noise. Because the City is prevented from controlling noise at the source, City noise programs focus on reducing the impact of transportation noise on the community. Cost effective strategies to control noise impacts are an essential component of this Element.

The most effective method for mitigation of transportation noise impacts on the community is by utilizing the site design review process and CEQA. Identification of potential impacts from transportation noise will occur during these stages of the development process and mitigation measures will be required as needed to meet the City's noise standards. Site planning, landscaping, topography and the design and construction of noise barriers are the most common method of alleviating vehicular traffic and train noise impacts. Small noise reductions can be achieved by using setbacks and buffers.

Noise barriers should be included in the design of roadway, freeway and rail improvements. The City will support efforts by Caltrans, railway operators, and other transportation providers to provide acoustical protection for noise sensitive uses. Additionally, the City will request that barriers will be included in freeway, railway and rail improvement projects to mitigate significant noise impacts. Interstate 8 is a prime candidate for alternative sound attenuation measures to protect the community from excessive transportation noise. The City will promote the use of berms, embankments, landscaping, setbacks, and architectural design where appropriate, rather than conventional wall barriers. The City will also continue to review projects proposed in areas impacted by aircraft noise to ensure that only appropriate development occurs.

### ***Noise Control at the Source***

The California Vehicle Code contains noise regulations pertaining to the operation of all vehicles on public roads. These noise standards for cars, trucks and motorcycles are enforced through coordination with the California Highway Patrol and the El Centro Police Department. The City also regulates traffic flow and coordinates with the California Highway Patrol to enforce speed limits to reduce traffic noise.

### **Non-Transportation Related Noise**

Sensitive receptors must also be protected from excessive noise generated by non-transportation sources, such as commercial and industrial centers, agricultural activities, and restaurants and bars. City noise requirements are the best means to control noise from existing noise sources; while noise generated by new development is effectively controlled through the site design review process, compliance with CEQA, and compliance with City noise standards contained in the Noise Element of the General Plan and Zoning Ordinance. During the preliminary stages of the

development process, potential noise impacts must be identified and mitigation measures can be imposed.

When reviewing proposed non-residential projects, noise generation and potential impacts to surrounding development will be considered. Acoustical analyses will be required for projects that will generate noise that could affect sensitive receptors. Where significant impacts are identified, mitigation measures will be required. Mitigation measures that could be applied when reviewing projects include acoustically treated and/or quiet design: 1) furnaces; 2) fans; 3) motors; 4) compressors; and 5) valves and pumps. The City may also require limited delivery hours and hours of operation in order to minimize impacts to adjacent residential uses.

In addition, all City departments must comply with State and federal OSHA standards. Any new equipment or vehicles purchased by the City will comply with local, State and federal noise standards.