

6. NOISE ELEMENT

6.1 Noise Element Introduction

The State Office of Planning and Research Noise Element Guidelines require that major noise sources be identified and quantified by preparing generalized noise contours for current and projected conditions. Significant noise sources include traffic on major roadways and highways, railroad operations, airports, and representative industrial activities and fixed noise sources.

Noise is measured by the Community Noise Equivalent Level (CNEL) which is a 24-hour energy equivalent level derived from a variety of single-noise events, with weighting factors of 5 and 10 dBA applied to the evening (7p.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.) periods to allow for greater sensitivity to noise during these hours. An alternative noise measure is Leq, the energy equivalent level, defined as the average sound level on the basis of sound energy (or sound pressure squared). The Leq is a “dosage” type measure and is the basis for the descriptors used in current standards, such as the 24-hour CNEL used by the State of California.

Noise modeling techniques and noise measurements were used to develop generalized CNEL or Leq noise contours for the major roadways, railroads and fixed noise sources in the City of Anderson General Plan study area for existing and future conditions.

Noise modeling techniques use source-specific data including average levels of activity, hours of operation, seasonal fluctuations, and average levels of noise from source operations.

Modeling methods have been developed for a number of environmental noise sources including roadways, railroad line operations, railroad yard operations and industrial plants. Such methods produce reliable results as long as data inputs and assumptions are valid.

The modeling methods used in this report closely follow recommendations made by the State Office of Noise Control, and were supplemented where appropriate by field-measured noise level data to account for local conditions. The noise exposure contours are based upon annual average conditions. Because local topography, vegetation or intervening structures may significantly affect noise exposure at a particular location, the noise contours should not be considered site-specific.

Noise data tables for the City of Anderson are at the end of this section.

6.2 Noise Sources

6.2.1 Roadway Noise

The biggest source of noise in Anderson is the Interstate 5 Freeway with State Highway 273 being a slightly lesser source of noise. The future (2025) noise contour for the Interstate 5 Freeway is much larger than the present noise contour.

Roadway noise is a combination of direct noise emission from the vehicle and the sound from the passing of tires over the road surface. In addition, large truck traffic can dramatically contribute to roadway noise, as the sound generated from exhaust brakes, large tires, and diesel engines greatly exceeds noise from passenger cars and light trucks. Interstate 5 has a large percentage of truck traffic.

6.2.2 Railroads

The railroad is also a source of noise in Anderson. The noise contours for the railroad are shown in Appendix B.

6.2.3 Fixed Noise Sources

Industrial, commercial, recreational and public service facility activities can also produce noise, which affects adjacent sensitive land uses. These noise sources can be continuous and may contain tonal components, which may be annoying to individuals who live in the nearby vicinity. In addition, noise generation from fixed noise sources may vary based upon climatic conditions, time of day and existing ambient noise levels.

The Redding Municipal Airport noise contour is close to the City of Anderson. However most of the new development will take place west of the City. The Shasta District Fairgrounds also produce noise, especially when there are concerts and/or automobile races.

From a land use planning perspective, fixed-source noise control issues focus upon two goals: to prevent the introduction of new noise producing uses in noise-sensitive areas and to prevent encroachment of noise sensitive uses upon existing noise-producing facilities.

The first goal can be achieved by applying noise level performance standards to proposed new noise-producing uses. The second goal can be met by requiring that new noise-sensitive uses near to noise-producing facilities include mitigation measures to ensure compliance with noise performance standards.

6.2.4 Nuisance Noise

In addition to train operations, other noise sources within the community may be considered to be “nuisance noise sources”. These types of noise sources could include barking dogs, live music venues, boom boxes, or exhaust brakes on trucks. These types of noise sources are difficult to quantify due to the sporadic nature in which they occur, and are in many instances transient in nature. However, these are the noise sources which generate complaints and are the primary concern of residents.

The noise element of a General Plan is intended to establish acceptable noise levels for new projects within a community, and it not a tool for responding to noise complaints. A community noise ordinance is used for responding to noise complaints. Chapter 8.30 Noise Control, of the City of Anderson Code sets forth the law regarding allowable noise and the procedure for dealing with noise complaints.

6.2.5 Community Noise Survey

The results of the Community Noise Survey conducted by Jones and Stokes, Inc. are shown in Appendix B. Based upon the analysis completed for this General Plan, the noise environment within the City of Anderson is similar to that of an urban and suburban area. Primary noise sources include roadway traffic (especially Interstate 5 and State Highway 273), railroad operations, the fairgrounds and typical neighborhood activities. The overall existing noise environment which has been documented is intended to be used as a bench-mark for evaluating noise associated with future growth within the City.

6.3 Objectives, Policies, and Implementation Program

Noise Objective:

To mitigate noise, maintaining a livable environment in the City of Anderson.

A. Noise Policies (NP)

NP-1 Ensure that noise is kept within acceptable levels in all residential and mixed-use neighborhoods. (Land Use Element) (Housing Element)

NP-2 Avoid placing high noise-generating land uses adjacent to residential development, schools, hospitals or similar noise-sensitive receptors. (Land Use Element) (Recreation Element)

NP-3 Avoid placing noise-sensitive receptors near high noise-generating land uses. (Land Use Element) (Recreation Element)

B. Noise Mitigation Implementation (NI)

NI-1 Periodically review and update the City's Noise Ordinance to reflect new data on noise levels in the City.

NI-2 Monitor the effectiveness of the City's noise control ordinance by keeping track of complaints.

NI-3 Plan circulation routes and adjoining land uses to avoid truck and high-volume traffic near noise-sensitive receptors such as residential neighborhoods, schools and hospitals. (Circulation Element)

- NI-4 A noise study shall be done by a qualified noise professional for sensitive development within the 60dB noise contour and noise impacts shall be mitigated to the Municipal Code.
- NI-5 A noise study shall be done by a qualified noise professional for noise-generating development and noise mitigation measures developed to the Municipal Code.
- NI-6 Require appropriate noise barriers or design features for projects which significantly increase noise levels.
- NP-7 Consider and mitigate noise impacts in the development permitting process. (Air Quality Element)
- NI-8 Comply with provisions of the Redding Municipal Airport's Airport Comprehensive Land Use Plan (CLUP).
- NI-9 Mitigate short-term construction noise by limiting hours of operation or appropriate mitigation strategies.
- NI-10 Use the 2025 Noise Contours to plan for noise-sensitive receptors.

6.4 Noise Contour Maps and Tables

The following pages show noise tables. The original study is on file with the City of Anderson Planning Department. Noise Contour Maps are in Appendix A.