



CITY OF NORCO
2050 GENERAL PLAN

NOISE ANALYSIS

NOVEMBER 13, 2023



NORCO GENERAL PLAN NOISE ELEMENT

Introduction

This Existing Conditions Memo has been developed to assess and summarize the existing environmental conditions related to noise in the City of Norco. This memo is intended to assist in the identification of key issues affecting the City that may require modification or creation of new goals, policies, and implementation actions.

The information provided in this report is based on a review of the following documents:

- 2003 Norco General Plan Noise Element
- Norco Municipal Code § 9.07
- Office of Planning and Research (OPR) General Plan Guidelines

Other resources addressing noise include guidance from Federal and state agencies like the Federal Transit Administration (FTA), Federal Highways Administration, and the California Department of Transportation (Caltrans), and current academic literature regarding noise and vibration.

Regulatory Framework

The following summarizes the Federal, state, and local regulations related to noise and vibration in Norco.

Federal

UNITED STATES CLEAN AIR ACT

Title 42 of the United States Code deals with protection of public health, social welfare, and civil rights. Within Title 42, Chapter 85 addresses Air Pollution Prevention and Control (commonly known as the Clean Air Act). Subchapter IV of Chapter 85 addresses Noise Abatement requirements, which apply to activities conducted or overseen by Federal departments or Agencies.

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control provides valuable analysis and guidance to local and state agencies to address noise effects. This guidance can assist jurisdictions with understanding and applying noise regulations within their jurisdiction in compliance with Federal requirements.

State

CALIFORNIA GOVERNOR'S OFFICE OF PLANNING AND RESEARCH

California Government Code § 65302(f) identifies the requirements for the preparation of a General Plan Noise Element. The key components required in this element include:

- Identification and appraisal of noise problems in the community.
- Current and projected noise levels for major roadways and thoroughfares, air transport activities, and uses and developments that generate high levels of noise.
- Noise contours should be developed to help establish land use patterns that minimize the exposure of community residents to excessive noise.

- Include policies and implementation measures/ actions to address existing and future noise issues and serve as a guide for compliance with the local and state requirements.

CALIFORNIA HEALTH AND SAFETY CODE, DIVISION 28, NOISE CONTROL ACT

Commonly known as the “California Noise Control Act of 1973” this law recognizes that excessive noise is a serious hazard that can result in physiological, psychological, and economic damage to the public health and welfare. Recognizing that noise in the urban, suburban, and rural settings continues to increase, the State has the responsibility to assist communities in the control, abatement, and prevention of unwanted and hazardous noise. The goal of this law is to provide an environment where noise does not jeopardize residents’ health or welfare. State activities would be required to adhere to the provisions of this law as well as local requirements where applicable.

CALIFORNIA DEPARTMENT OF TRANSPORTATION

In 2020, Caltrans published an updated version of the Transportation and Construction Vibration Manual. The manual provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage. To access this manual click this [hyperlink](#).

Local

CITY OF NORCO NOISE STANDARDS (MUNICIPAL CODE)

Chapter 9.07 of the Norco Municipal Code includes the Noise Regulations for the City. This chapter of the municipal code helps to regulate noise emanating from uses and activities within the City. A key section that is referenced during the development process is Section 9.07.040, which includes a table that identifies sound level standards by land use designation. These standards allow the City to determine the maximum decibel levels permitted for both daytime and nighttime periods, depending on the land use and development proposed. The Special Sound Sources Standards section also provides criteria to determine excessive noise generation from properties, allowing the City to better regulate uses that may create a nuisance to neighboring properties (house parties, unregulated businesses, etc...)

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- 9.07.010 Purpose, intent and findings.*
 - 9.07.020 Exemptions.*
 - 9.07.030 Definitions.*
 - 9.07.040 General sound level standards.*
 - 9.07.050 Sound level measurement methodology.*
 - 9.07.060 Special sound sources standards.*
 - 9.07.070 Violations and penalties.*
 - 9.07.080 Duty to cooperate.*
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NOISE SCALE

Noise is measured in decibels (dB), which is a logarithmic scale used to measure sound. Most sounds are not harmful to a person’s health, however prolonged exposure to sounds above 85dB can affect hearing and have other health effects. **Figure 1** identifies the noise measurements that coincide with various sounds typically heard within a city.

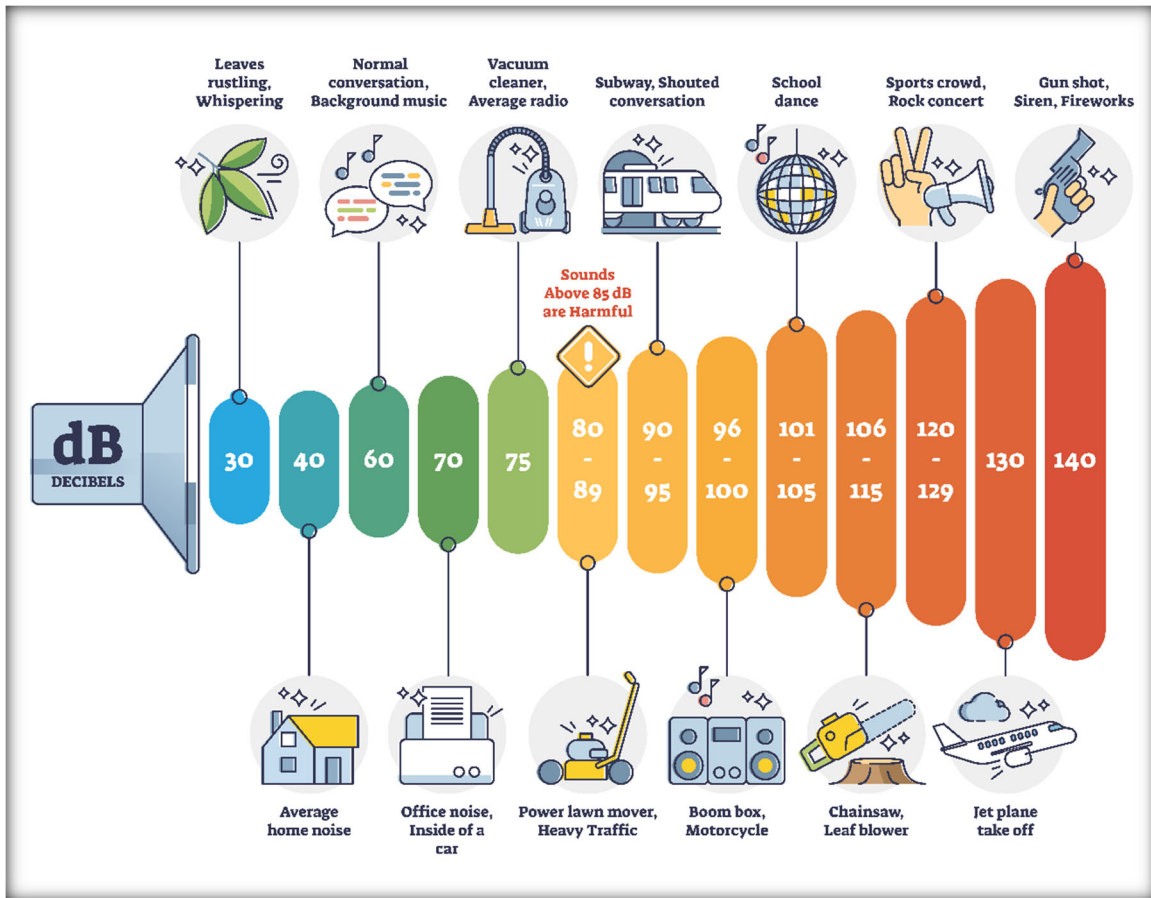


Figure 1 - Noise Level Measurements

Issues/Constraints

Noise within the City of Norco is generated from a variety of sources. Land uses sensitive to noise generally include uses where noise exposure could result in health-related risks, or where quiet is an essential element of their intended purpose. The City has identified noise impacted areas, which identify many of parts of the City where noise levels are higher. A majority of these areas are located along major roadways and the I-15 corridor. **Figure 2** identifies these mapped areas which are areas of greatest concern for noise. Typical sources of noise within the community include the following:

Freeway Noise

Interstate 15 (I-15) is a major transportation route the bisects the City. Over 300,000 average annual daily trips occur along the corridor, which can generate a significant amount of noise for adjacent properties. According to the FHWA, levels of noise typically range from 70 to 80 dB within 50 feet of a highway. Many of the properties within close proximity to I-15 are commercial uses, however some residential uses located adjacent to this facility may experience noise impacts during certain parts of the day.

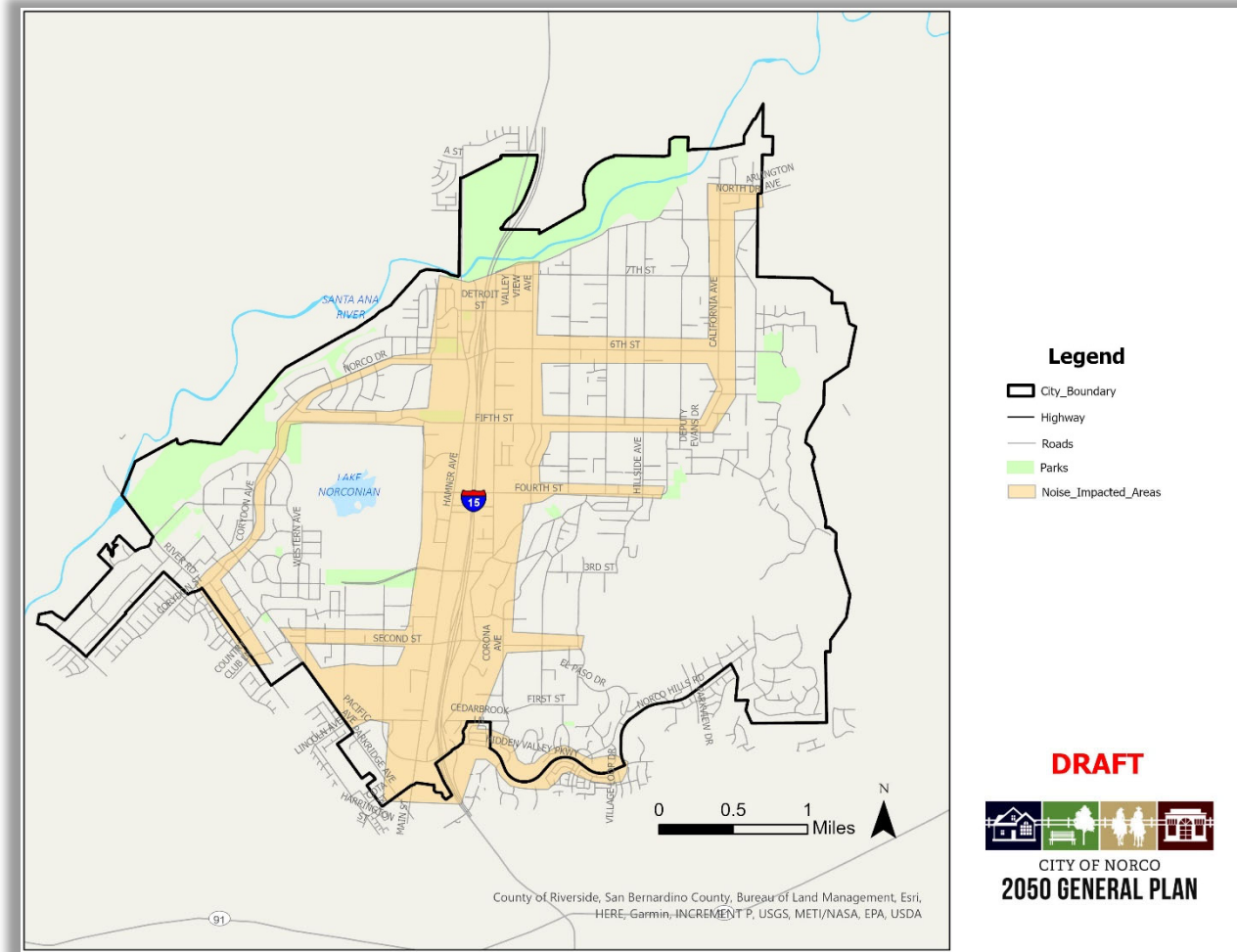


Figure 2 - Noise Impacted Areas

Animal Keeping

As a rural community, portions of the City include large lot style single family homes that often include ancillary agricultural uses. Many of these residents may keep a variety of animals that can generate noises not typically heard in typical suburban neighborhoods. Animals expected to generate noise within Norco include horses, chickens, goats, sheep, and pigs. Of these animals the loudest sounds may come from a pig squeal at 115 dB or a rooster crow at 90 dB. For reference a barking dog typically can also measure at 90 dB, which is typical sound heard in most residential neighborhoods.

Special Events

Special events are another potential source of noise. The City has several locations where special events can be held, which include Silverlakes, the Ingalls Event Center and parks within the City large enough to accommodate these activities. While it is difficult to identify the typical sound levels that occur during these events, any proposed activities are required to comply with the City’s Municipal Code noise standards.

Industrial/Commercial Noise

Industrial and commercial uses can sometimes generate noise, associated with the operation of the business. For these types of uses, sound generation must comply with the requirements identified in Section 9.07.040 of the Norco Municipal Code. Typically noise generation conflicts occur when a property is being used in a manner that is different than what the zoning intended, or if the business is conducting unregulated activities outside of approved permits granted by the City.

Motor Vehicles

Motor vehicles are a major source of noise within any city. In the case of Norco, much of the area identified as noise impacted (see Figure 2), is along major roadways. Cars moving along roadways (30 mph) can typically generate sounds up to 70 dB. These sound levels can increase to nearly 90 dB when speeds increase to 70 mph. For Norco major thoroughfares are the primary location for noises that can impact the health of residents, workers, and visitors.

Aircraft Noise

The City is located outside of the influence areas for local and major airports (Ontario, Riverside, Chino, Corona) within the region. While not directly impacted by the operations of these facilities, overflights from both Ontario and LAX can occur depending on weather conditions and flight patterns. While these overflights may occur, the planes involved are still at high enough altitudes that noise disturbance is temporary and minimal in most cases.

Construction

Although temporary, construction noise can be a significant disturbance to the community. A majority of construction noise comes from equipment and machinery that generate noise in excess of 70 dB. While this equipment can generate dangerous noise levels if used for prolonged periods of time, their use is typically regulated, and these activities occur during normal operating hours within the City. Activities that have the highest noise potential include pile driving, sawing, and drilling, which often occur in short durations.

Noise Nuisance Issues

Due to the large lot sizes within the community, large parties and events occurring on private properties have become a nuisance for neighboring properties. Many of these activities are unpermitted and can generate calls to the City that involve code enforcement activities. Response to these types of events can affect the City's capabilities and budget. Although the municipal code does help regulate nuisance issues, the City should look at ways to deter and prevent these types of activities.

Land Use Considerations

Land use considerations associated with noise focus mainly on residential dwellings due to the potential for increased and prolonged exposure of individuals to both increased interior and exterior noise levels. Additional land uses such as parks, schools, historic sites, cemeteries, and recreation areas are also generally considered sensitive to increases in exterior noise levels. Places of worship and transit lodging, and other places where low interior noise levels are essential are also considered noise sensitive. Those noted above are also considered vibration-sensitive land uses in addition to commercial and industrial buildings where vibration would interfere with operations within the building, including levels that may be well below those associated with human annoyance.

Needs and Opportunities

Noise is a common side effect of city activities. Noise can be generated at stationary locations (i.e., car wash) or move throughout the community (motorcycle). The interaction of uses and the ways that people live and work within their communities determines how much or little noise is produced. As a rural community, noise can have a negative effect on residents' quality of life. Therefore, from a land use perspective, identifying how current land uses may be exacerbating noise issues will be a key method to determining what changes to policies and regulations are necessary. Unfortunately, certain conditions within the community (I-15) may be outside of the City's control to change, however the actions that can be taken may relate to improving the comfort of residents and businesses in noise impacted areas, and ways to ensure a reduction in noise generation is achieved.

New land uses should reflect the changing nature of noise generation within our communities. For some properties within the community an increase in rural/agricultural activities may generate new or different noises that may depart from existing conditions, while other parts of the community may not experience a change.

Conclusions

Noise plays a key role in the quality of life within any community. In the case of Norco, there are several factors that contribute to the noise conditions experienced by residents and businesses:

- Interstate-15 is major throughfare through the City that generates a significant amount of noise. Properties adjacent to this facility can be subjected to noise impacts that could affect the health and well-being of occupants.
- Much of the commercial and industrial development is located in appropriate areas that help reduce noise related conflicts with neighboring properties.
- Increased use of commercial corridors for mixed-use or residential use should consider appropriate site design and building materials usage to address noise concerns.
- Increasing the intensity of agricultural uses and practices could change the character of some neighborhoods, however this may not be considered a negative impact.
- Code updates may be necessary to better regulate the following concerns:
 - Public nuisance abatement to help with excessive noise issues that may not trigger thresholds in the Noise Ordinance.
 - Modifications to special sound source standards to better manage noise complaints from properties generating excessive noise.
 - Investigating changes to criteria used for special permits and fines on residential properties being used for large events.