Santa Maria General Plan

imagine

Noise Element

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Introduction

The Noise Element is one of the required elements of the General Plan and aims to minimize community exposure to excessive noise, particularly for noise-sensitive land uses and during nighttime hours.

This Element consists of three main sections: Background, Issues and Opportunities, and Noise Policies. The *Background* section introduces existing conditions and trends related to priorities addressed in this Element. The *Issues and Opportunities* section describes the key issues and opportunities that shaped the Element. Finally, the *Noise Policies* section establishes regulatory standards and outlines the City's Noise goals, policies, and implementation actions.

The Noise Policies guide land use planning to mitigate noise impacts in areas of higher noise exposure. Specifically, policies address current and anticipated noise impacts, with specific consideration for sensitive land uses such as residences, schools, and hospitals.

Examples of noise sensitive uses in Santa Maria including a multi-family residential development (top left, top right), Liberty Elementary School (bottom left), and Marian Regional Medical Center (bottom right). Credits: Raimi & Associates, Homes.com, KSBY, respectively.

Automobile traffic on Broadway is a source of noise in the city.

Background

This section introduces existing conditions and trends related to priorities addressed in the Noise Policies.

Noise Ordinance

The Santa Maria Municipal Code contains requirements related to noise in Title 5 Chapter 5-5 and Title 12 Chapter 12. These regulations establish ambient noise level limits within residential, commercial, and industrial zones and provide a baseline framework for actions developers should take to mitigate anticipated noise concerns.

Measuring Noise Levels

Sound is commonly measured in decibels (dB). Noise levels referenced in the Noise Ordinance and this Element are measured in A-weighted decibels (dBA), which are frequency-adjusted to reflect the sensitivity of the human ear, unless otherwise noted. Additional noise level measurements commonly used and referred to in this Element include Community Noise Level Equivalent (CNEL) and equivalent energy level (Leq). CNEL measures the average sound level during a 24-hour period and incorporates adjustments for noise occurring during the evening and nighttime to account for increased sensitivity to noise during these times. CNEL is typically used to evaluate long-term noise exposure, such noise levels for airports, highways, and neighborhoods. Leq measurements consist of a single value used to represent varying noise levels over a specified period of time and is commonly used to measure traffic and construction noise.

Noise-Sensitive Land Uses

Certain land use types are especially sensitive to noise disturbance due to the nature of their use. The Noise Policies define noise-sensitive land uses as residential (single and multi-family dwellings, mobile home parks, dormitories, and similar uses); hospitals, nursing homes, convalescent hospitals and other facilities for long-term medical care; and public or private educational facilities, libraries, and churches.

The Santa Maria Municipal Code Section 5-5.09 requires that a permit be obtained from the Noise Control Officer to cover short-term construction activities within 500 feet of a residential zone that would exceed the City's noise standards, set in Section 5-5.05.

Noise Sources

Stationary Noise

Stationary noise sources contribute to the ambient noise environment only in their immediate vicinity. Examples include heating, ventilation, and air conditioning (HVAC) systems, loading docks, machinery, and commercial activity associated with restaurants, bars, outdoor dining, and parking garages and lots. Stationary noise can be generated by any land use, although industrial and commercial activities typically generate the highest noise levels.

Residences and schools typically generate lower noise levels, and the sources are often intermittent. Residential noise sources include landscaping, maintenance activities, and HVAC systems. Schools can generate enough noise through outdoor activities on both weekdays and weekends to elevate ambient noise levels. Commercial manufacturing, industrial plants, and agriculture operations generate stationary noise at their facilities. These operations are primarily located near the airport and in other concentrated areas away from noise-sensitive land uses to achieve acceptable noise levels and maintain land use compatibility.

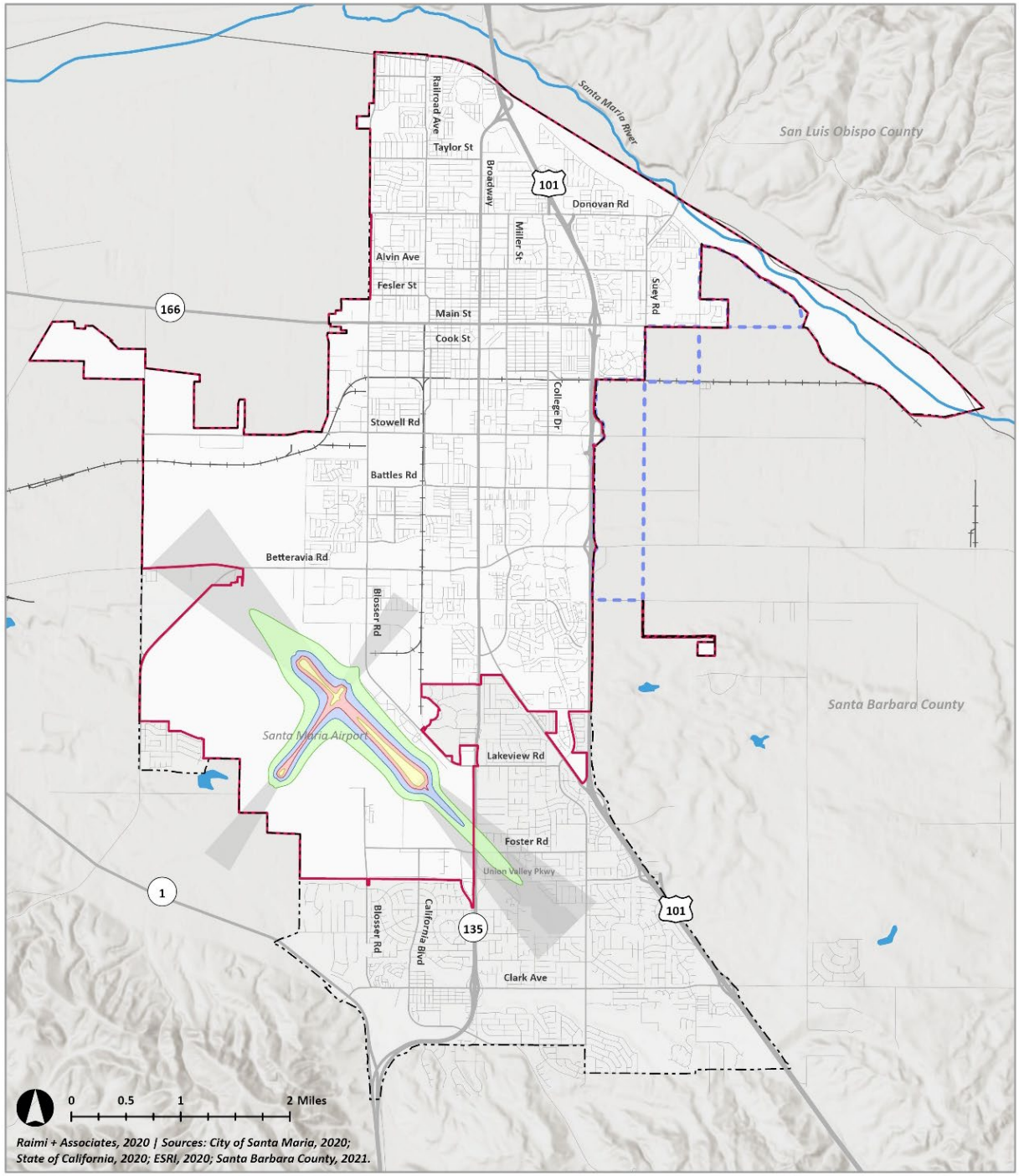
Vehicle Traffic Noise

Traffic noise from motor vehicles driving along roadways can be disruptive because it often creates a sustained noise level, even if the noise generated by a single vehicle does not seem significant. The level of noise can depend on the type of vehicle and its engine, speed of traffic, pavement type and texture, and distance from the roadway. In Santa Maria, roadway noise is a significant source of noise, particularly along major travel corridors such as U.S. 101, Broadway (SR-135), and Main Street (SR-166). Other major roadways that generate substantial noise in the city include Miller Street, Blosser Road, Skyway Drive, Donovan Road, Stowell Road, and Betteravia Road. Noise-sensitive residential uses are located along and near these major arterial roadways.

Air Traffic Noise

The Santa Maria Public Airport, located in the southern portion of the city, is a major source of noise in the area. The airport has two runways and provides facilities for commuter airlines, as well as flight instruction, aircraft rental and repair, and refueling services. The Airport Land Use Compatibility Plan (ALUCP) has noise policies to address noise compatibility of land uses within the Airport's noise contour zones. Noise-sensitive uses, including residential development, schools, and hospitals, are generally prohibited in the 65 to 75+ dB CNEL (Community Noise Equivalent Level) contour zones. As shown in Figure N-1, the 65-75+ dB CNEL noise contour zones are located within airport property, but the 60-65 CNEL noise contour extends past the airport property and overlaps with residential uses southeast of the airport.

Figure N-1: Airport Noise Contours



Rail Traffic Noise

Railway operations generate a localized source of noise along the railway corridor. However, noise from rail operations, for both goods and passengers, is primarily regulated by the Federal Railroad Administration (FRA), which sets and enforces safety standards that include noise for cabs, bells, and horns. The privately owned Santa Maria Valley Railroad provides daily freight service and consists of 14 miles of mainline track from Guadalupe to Santa Maria. This includes two railways that traverse the city, one from east to west along Jones Street and Stowell Road, and one from north to south, parallel to Depot Street, but these trains are restricted to a speed of 10 miles per hour through the city. Transload facilities are located at the Betteravia Industrial Park in Betteravia.

Construction Noise

Construction activity can generate substantial short-term increases in noise levels within the vicinity. Each phase of demolition and construction has its own noise characteristics; some may generate substantial intermittent noise levels from high-impact activities like pile-driving, while others may generate high continuous noise levels, depending on the type and amount of equipment used. Noise levels from individual pieces of construction equipment range from 76 to 101 dBA Leq (Equivalent Energy Level) at 50 feet, and nearby noise-sensitive receivers may find this disruptive.

Noise generated from the construction of a housing development.

Other Noise Sources

Other sources of noise in the city may include amplified noise from events, such as those held at the fairgrounds. Amplified noise is sound magnified in volume by amplification devices such as radios, televisions, loudspeakers, stereos, megaphones, and public address systems. This type of noise is usually associated with social gatherings in residential areas and large events held in public spaces (schools, parks, restaurants, beaches, music/event venues). Although these events tend to occur more frequently in summer months, amplified noise from school speakers, drive-through restaurant speakers, and daily recreational activities can contribute to ambient noise levels throughout the year. Amplified noise levels can range from approximately 65 dBA Lmax (Maximum Sound Level) at 30 feet for drive-through restaurant speakers to approximately 90 to 100 dBA at outdoor festivals.

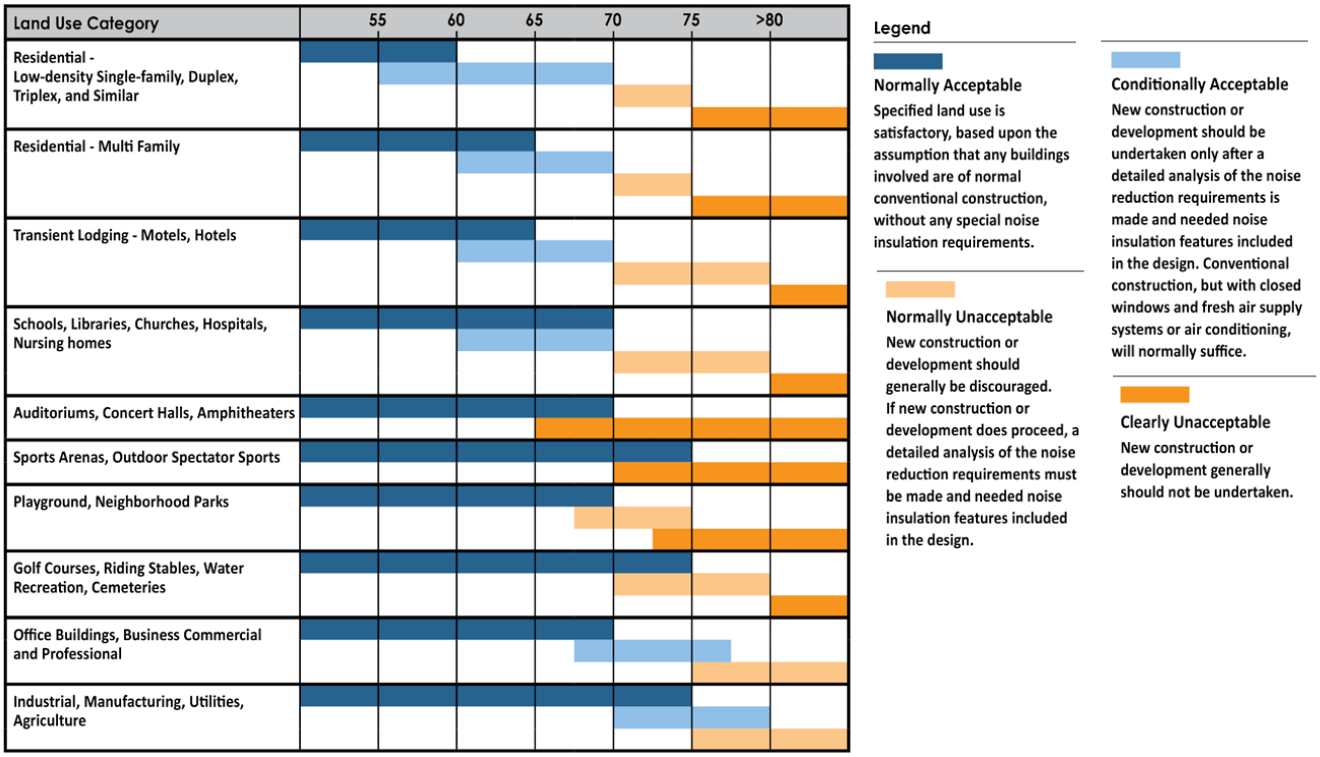
The Santa Barbara County fairgrounds are located near the center of the city and operate year-round to hold both public and private events beyond the fair itself. The amplified sound produced at these events can be a temporary source of amplified noise near noise-sensitive land uses (e.g., schools and residences). Other land uses like car washes or industrial areas that use loud equipment, such as air blowers, pumps and shredders, are also a localized source of noise in the city.

Santa Barbara County Fair at the Santa Maria Fairpark. Credit: Santa Maria Fairpark.

Community Noise and Land Use Compatibility

The California Governor's Office of Land Use and Climate Innovation (LCI), previously the Office of Planning and Research, created guidelines specifying acceptable community noise levels for various land uses (see Figure N-2). Residential uses have the lowest acceptable noise levels, while uses such as sports areas and industrial, manufacturing, and agricultural uses have the highest acceptable noise levels.

Figure N-2: Community Noise and Land Use Compatibility Guidelines (shown in CNEL, dB)



Source: General Plan Guidelines, California Office of Planning and Research 2017

Vibration Sources

Typical vibration sources in Santa Maria include construction activities, railroad operations, and heavy manufacturing. Areas near the airport may also experience air and ground-borne vibration. The City of Santa Maria has not adopted standards to limit vibration in the city.

Issues and Opportunities

This section describes the issues and opportunities that informed the policy direction of the Noise Policies.

Noise-sensitive land use planning. Noise-sensitive land uses, such as residential areas, require proactive protections to preserve the community's quality of life. The City establishes noise standards and addresses potential land use compatibility and noise mitigation through the Santa Maria Public ALUCP and the City's Noise Ordinance. Continued refinement of these regulations will ensure new development remains compatible with community expectations and environmental conditions.

Transportation noise. Major transportation corridors such as US-101, Broadway, and Main Street, along with rail and airport operations, generate consistent noise that can affect adjacent neighborhoods, especially residential areas. As these roadways, railroads, and the airport continue operating, enhancing existing noise regulation and mitigation efforts and planning for future transportation infrastructure will help reduce noise impacts and preserve quality of life.

Construction noise. Ongoing development and infrastructure improvements have the potential to generate noise that may be disruptive to nearby sensitive land uses, especially during nighttime construction activities, which can be particularly obtrusive to residents. The City requires approvals for nighttime construction, and all construction is required to comply with noise regulations within the City's Noise Ordinance. Strengthening development standards and enforcement mechanisms can provide greater clarity on when the City should approve such nighttime construction noise and enhance mitigation efforts that would benefit nearby noise-sensitive land uses.

Vibration mitigation. Construction activities, along with railroad and airport operations, can generate ground-borne vibration that can damage buildings and disturb sensitive land uses. The California Environmental Quality Act requires both programmatic and project-level documents to evaluate whether proposed activities could result in ground-borne vibration impacts and their potential effects on noise sensitive land uses. However, the City has not established local regulations to address vibration. Cumulative impacts from ongoing construction, rail freight, and airplanes could lead to vibration concerns. Therefore, identifying areas with higher exposure to vibration sources and implementing best practices to mitigate potential impacts will help maintain a healthy and livable environment.

Housing abutting main corridors is often impacted by transportation noise.

Noise Policies

The Noise Policies address the key issues and opportunities identified above and create a comprehensive roadmap for the management and mitigation of noise and vibration impacts.

The *Standards and Diagrams* section defines regulatory requirements. Standards establish levels of quality or quantity that must be complied with or satisfied, while diagrams visually illustrate the intent or application of specific policies.

The *Policy Framework* section outlines Noise goals, policies, and implementation actions. A goal describes the community's desired future. A policy is a specific statement of intent that guides decision-making. An action is an activity, procedure, program, or project that carries out a policy.

Policy Summary

The goals, policies, and implementation actions of the Noise Element are centered on preventing noise impacts on nearby sensitive land uses through the proper placement of new noise-generating activities (Goal N-1), mitigating noise disturbances from transportation sources (Goal N-2), enhancing City noise regulations to alleviate noise impacts from construction activities (Goal N-3), and minimizing disruptions from ground-borne vibration (Goal N-4).

Standards and Diagrams

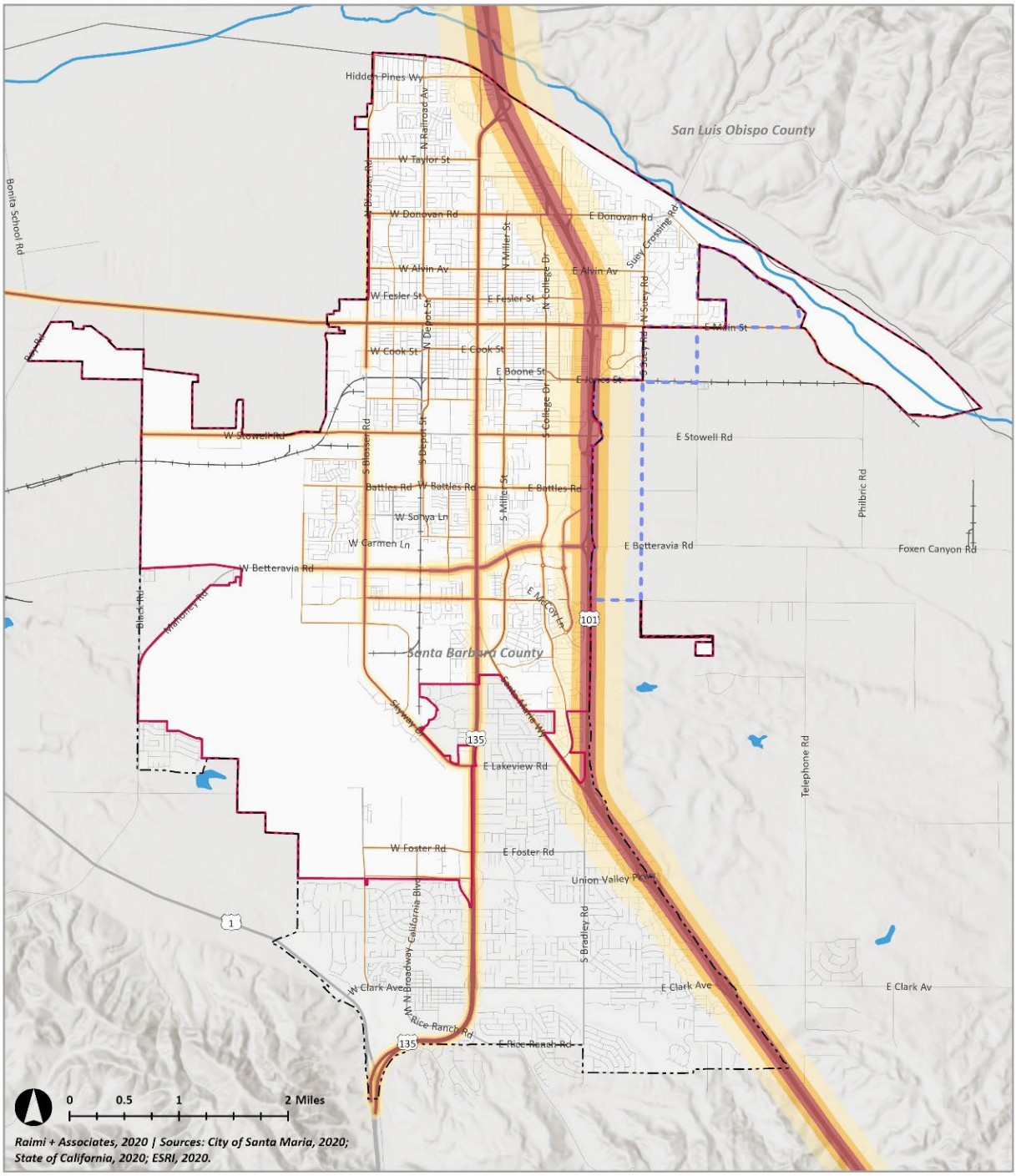
Noise Sensitive Land Uses

Noise-sensitive land uses include residential (single and multi-family dwellings, mobile home parks, dormitories and similar uses); hospitals, nursing homes, convalescent hospitals and other facilities for long-term medical care; and public or private educational facilities, libraries, and churches.

Noise Contours

The City's noise contour map identifies noise levels for different areas within the city, showcasing areas where noise impacts may affect land use compatibility. This map guides planning decisions that minimize noise exposure to residents (see Figure N-3).

Figure N-3: Noise Contour Map



Santa Maria General Plan imagine

- Current Santa Maria City Limits
- Current Sphere of Influence
- Planned Annexation Area and Sphere of Influence
- County Boundaries
- Railroads
- Freeways and Highways
- Santa Maria River

Existing Noise Contours (CNEL)

- 60 dBA
- 65 dBA
- 70 dBA

Policy Framework

Goal N-1: Compatible land uses. Land uses are planned to provide a harmonious environment by considering the compatibility of adjacent uses.

Policy N-1.1: Placement of noise-generating uses. Regulate the placement and construction of new noise-generating uses to avoid excessive noise impacts on adjacent noise-sensitive land uses, as defined in the Standards and Diagrams section above.[1]

Action N-1.1.1: Incorporate into the Noise Ordinance the definition of noise-sensitive land uses and the noise contours map to reference when reviewing development applications. If possible, do not locate known noise-generating sources adjacent to noise sensitive uses, or if unavoidable, require appropriate mitigation if adjacent location is unavoidable.

Action N-1.1.2: Establish land use compatibility guidelines for community noise to determine which types of land use categories are generally considered compatible with the ambient decibel levels by most communities. Reference or incorporate LCI's Community Noise and Land Use Compatibility table (see Figure N-2).

Policy N-1.2: Interior and exterior noise standards. Require development proposals to meet the interior and exterior noise standards specified in the Noise Ordinance (Chapter 5-5 of the Santa Maria Municipal Code).[2]

Action N-1.2.1: Require applicants to provide a noise study for projects requiring discretionary review to determine if they will generate noise that would exceed the allowable noise levels for adjacent noise-sensitive land uses. Require applicants to implement appropriate mitigation measures to meet acceptable noise levels established by the Noise Ordinance.

Action N-1.2.2: Promote federal, state, and regional financial incentives and funding programs for noise mitigation retrofits—such as soundproof windows, improved insulation, and acoustic barriers—of existing buildings that are located in areas of high traffic noise or incompatible adjacent land uses.

Policy N-1.3: Noise compatible land uses. Identify current and planned noise-generating commercial manufacturing and industrial businesses within the city and the Santa Maria Valley. Consider these plans when making land use planning decisions to prevent potential future noise conflicts.

Action N-1.3.1: Establish bi-annual meetings with the Santa Maria Public Airport and the Santa Maria Valley Railroad to collaboratively discuss upcoming planning, projects, and expansions that may impact overall operations or community wellbeing.

[1] Please see the Recreation and Parks, Circulation, Land Use, and Health and Environmental Justice Elements for policies and actions related to land use conflicts.
[2] Please see the Land Use and Safety Elements for additional policies and actions related to building design.

Action N-1.3.2: Consider potential noise conflicts in short- and long-term plans for the Santa Maria Public Airport and Santa Maria Valley Railroad, as well as when reviewing development applications involving noise-generating uses.

Policy N-1.4: Stationary noise sources. Ensure outdoor machinery, appliances, and other noise-generating devices are located away from noise-sensitive uses and mitigated to reduce exposure to intrusive noise.

Action N-1.4.1: Update the Municipal Code to require mixed-use and commercial development applicants to locate noise-generating components such as loading areas, mechanical equipment, and other similar facilities as far from residential units as possible.

Action N-1.4.2: Update the Municipal Code to establish a threshold for requiring additional noise buffering of machinery to reduce intrusive noise from new development. Such buffering may include, but is not limited to, acoustic paneling, sound-absorbing materials, and enclosures.

Policy N-1.5: Ongoing evaluation and update of Noise Ordinance. Regularly evaluate and update the Noise Ordinance to ensure alignment with current best practices, compatibility with ongoing planning and development efforts, and community needs.

Action N-1.5.1: Conduct assessments of the Noise Ordinance at least once every five years to identify areas for improvement based on modern standards, emerging urban development trends, and stakeholder feedback, ensuring alignment with broader development goals.

Action N-1.5.2: Regularly update and post resources on the City's official website to inform residents about the City's noise regulations, including permissible noise levels and reporting mechanisms.

Goal N-2: Transportation noise. Noise impacts from traffic and other transportation-related activities are minimized or mitigated.

Policy N-2.1: Major thoroughfare noise mitigation. Require future development to implement feasible noise mitigation measures along major thoroughfares like Main Street, Broadway, and US-101.

Action N-2.1.1: Coordinate with the California Department of Transportation to effectively attenuate state freeway and roadway noise through the use of 'quiet' paving materials, placement of noise barriers, berms, and landscaped open space within State right-of-way for existing residences and incorporating design features in new development to reduce future noise level increases.

Action N-2.1.2: Work with the California Department of Transportation to ensure adequate noise studies are prepared and noise mitigation measures are considered in State transportation projects.

Action N-2.1.3: Regularly update the noise contour map to reflect changes in ambient noise levels from transportation sources as airport and roadway conditions and patterns within the city evolve.

Action N-2.1.4: Update the City's Municipal Code to require new residential and mixed-use development within the 60 dBA CNEL noise contours or higher of transportation corridors to submit an acoustical analysis and incorporate noise reduction strategies, such as vegetation buffers and physical sound barriers, as necessary to meet the requirements of the Noise Ordinance.

Policy N-2.2: Industrial and agricultural traffic noise reduction measures. Evaluate and identify measures and strategies to reduce traffic noise from industrial and agricultural truck traffic, and coordinate with local businesses to implement the measures and strategies as needed.

Action N-2.2.1: Coordinate with businesses to identify possible limitations on local truck traffic, including loading and unloading, specific routes, times, and speed limits appropriate for each zoning district, while ensuring compatibility with essential business operations.

Action N-2.2.2: Work with local businesses and law enforcement to minimize traffic noise by encouraging the use of preferred routes and delivery times.

Policy N-2.3: Airport noise mitigation. Require aviation easements and noise mitigation measures in new residential developments near the airport in the 60+ dB CNEL contour.

Action N-2.3.1: Encourage future Santa Maria Airport facility development or expansion to incorporate noise reduction measures to minimize stationary source noise impacts on surrounding areas where necessary.

Action N-2.3.2: Review and, as needed, revise land use designations to ensure consistency with the ALUCP noise contour maps.

Policy N-2.4: Roadway vehicle noise reduction measures. Require projects that may result in a substantial increase in roadway traffic noise on area roadways to implement measures designed to reduce noise and minimize the impact on noise-sensitive land uses.

Action N-2.4.1: Where cumulative roadway traffic noise would exceed the applicable traffic noise increase standards, require applicants for new development projects to retain a qualified acoustical consultant to prepare a Traffic Noise Reduction Study that specifies, at a minimum, the specific locations, extent, height of sound walls, and other design details such as "quiet pavement" to reduce traffic noise impacts at impacted roadways. Project specific environmental documents may adjust recommended noise reduction measures as necessary to respond to site specific conditions.

Action N-2.4.2: For locations where a Traffic Noise Reduction Study identifies a need for sound barriers, require developers to contribute their fair share toward constructing new sound barriers (e.g., walls or solid fences) along impacted roadways where there are no driveways that would break continuity and along the residential portions or other sensitive receiver locations of such roadways. Sounds barriers should be continuous from grade to top, with no cracks or gaps, and have a minimum surface density of four pounds per square foot and a minimum height of six feet, as measured from the base elevation.

Action N-2.4.3: For locations where a Traffic Noise Reduction Study identifies a need for roadway improvements to reduce roadway traffic noise where sound barriers are determined not to be feasible,

require developers to contribute their fair share toward installation of "quiet pavement" roadway improvements, such as rubberized asphalt or open-grade asphalt concrete overlays.

Goal N-3: Temporary and construction noise. Noise from temporary sources and construction activities is minimized to the greatest extent possible.

Policy N-3.1: Construction noise mitigation. Limit construction noise in residential areas to reduce noise impacts, especially in the early morning, late evening, weekends, and during holidays.

Action N-3.1.1: Develop criteria to clearly define conditions of approval for nighttime construction activities that will balance project requirements and minimize community disturbance and update the Noise Ordinance accordingly to establish approval criteria and thresholds for determining the need for additional noise attenuation strategies.

Action N-3.1.2: Revise the Noise Ordinance to require appropriate noise attenuation strategies for any approved nighttime construction to minimize disturbance to the greatest extent feasible.

Action N-3.1.3: Update the Noise Ordinance to require the use of mufflers on construction equipment and maintain physical separation of machinery maintenance areas from nearby residential uses.

Goal N-4: Vibration. The impacts of excessive ground-borne vibration from temporary and ongoing operations are limited.

Policy N-4.1: Vibration reduction for noise sensitive land uses. Reduce vibration impacts to noise sensitive land uses and prevent building damage.

Action N-4.1.1: Update the Municipal Code to require new vibration-sensitive uses within 200 feet of a potential vibration-causing source, including the Santa Maria Valley Railroad, to prepare a ground-borne vibration and noise assessment consistent with Federal Transit Administration-recommended methodology and criteria.

Action N-4.1.2: Ground-borne vibration mitigation. Update the Municipal Code to establish building architectural and structural vibration thresholds that prevent building damage from vibration.