

## NOISE ELEMENT

### 1.0 INTRODUCTION

#### 1.1 Authority

“The purpose of the noise element is to limit the exposure of the community to excessive noise levels.”<sup>1</sup> The 2003 Noise Element Guidelines requires local governments to “analyze and quantify noise levels and the extent of noise exposure” through field measurements or noise modeling, and “implement measures and possible solutions to existing and foreseeable noise problems.” California Government Code Section 65302(f) requires that current and projected noise levels be analyzed and quantified for highways, freeways, primary arterials, and major local streets. Noise contours for current and projected conditions within the community are required to be prepared in terms of either the Community Noise Equivalent Level (CNEL) or the Day-Night Average Level ( $L_{dn}$ ), which are descriptors of total noise exposure at a given location for an annual average day. CNEL and  $L_{dn}$  are generally considered to be equivalent descriptors of the community noise environment within plus or minus 1.0 dBA. Section 1.4 provides an explanation of the acoustical terminology used in this document.

It is intended that the noise exposure information developed for the Noise Element be incorporated into the General Plan to serve as a basis for achieving Land Use compatibility within the unincorporated areas of the County. It is also intended that the noise exposure information developed for the Noise Element be used to provide baseline levels for use in the development and enforcement of a local noise control ordinance to address noise levels generated by non-preempted noise sources within the County.

According to the Noise Element Requirements and Noise Element Guidelines, the following major noise sources should be considered in the preparation of a Noise Element:

1. Highways and freeways
2. Primary arterials and major local streets
3. Passenger and freight online railroad operations and ground rapid transit systems
4. Commercial, general aviation, heliport, helistop, and military airport operations, aircraft over flights, jet engine test standards, and all other ground facilities and maintenance functions related to airport operation
5. Local industrial plants, including, but not limited to, railroad classification yards
6. Other ground stationary sources identified by local agencies as contributing to the community noise environment

Noise-sensitive areas to be considered in the Noise Element should include areas containing the following noise sensitive land uses:

1. Schools
2. Hospitals
3. Convalescent homes
4. Churches
5. Sensitive wildlife habitat, including the habitat of rare, threatened, or endangered species
6. Other uses deemed noise sensitive by the local jurisdiction

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<sup>1</sup> State of California General Plan Guidelines 2003, Governor's Office of Planning and Research (OPR), State of California, October 2003, p. 87.

## 1.2 Relationship to Other Elements of the General Plan

The Noise Element is most related to the Land Use and Circulation Elements of the General Plan. Its relationship to the Land Use Element is direct in that the implementation of either element has the potential to result in the creation or elimination of a noise conflict with respect to differing land uses. The Land Use Element must be consistent with the Noise Element in discouraging the development of incompatible adjacent land uses to prevent impacts upon noise sensitive uses and to prevent encroachment upon existing noise-generating facilities.

The Circulation Element is linked to the Noise Element in that traffic routing and volume directly affect community noise exposure. For example, increased traffic volume may produce increased noise in a residential area so that noise control measures are required to provide an acceptable noise environment. Similarly, rerouting traffic from a noise-impacted neighborhood may provide significant noise relief to that area. Implementation of the Circulation Element should include consideration of potential noise effects.

## 1.3 Noise and Its Effects on People

The Technical Reference Document, included in the General Plan Support Document, is an update of a previous technical reference document and provides a discussion of the fundamentals of noise assessment, the effects of noise on people and criteria for acceptable noise exposure. It is intended that the Technical Reference Document serve as a reference for Stanislaus County when reviewing documents or proposals which refer to the measurement and effects of noise within the County.

## 1.4 Acoustical Terminology

**"Ambient noise levels"** means the composite of noise from all sources near and far. In this context it represents the normal or existing level of environmental noise at a given location for a specific time of the day or night.

**"A weighted sound level"** means the sound level in decibels as measured with a sound level meter using the "A" weighted network (scale) at slow meter response. The unit of measurement is referred to herein as dBA.

**"CNEL"** means Community Noise Equivalent Level. The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.

**"Decibel, dB"** means a unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

**"Equivalent Energy Level,  $L_{eq}$ "** means the sound level corresponding to a steady state sound level containing the same total energy as time varying signal over a given sample period.  $L_{eq}$  is typically computed over 1, 8 and 24-hour sample periods.

**"Impulsive Noise"** means a noise of short duration, usually less than one second, with an abrupt onset and rapid decay.

**"L<sub>max</sub>"** means the maximum A-weighted noise level recorded during a noise event.

**"Day/Night Average Sound Level, L<sub>dn</sub>"** is a 24-hour measure of the cumulative noise exposure in a community, with a 10 dBA penalty added to nocturnal (10:00 p.m. - 7:00 a.m.) noise levels.

**"Noise Exposure Contours"** Lines drawn about a noise source indicating constant energy levels of noise exposure. CNEL and L<sub>dn</sub> are the descriptors utilized herein to describe community exposure to noise.

**"Preempted Noise Source"** means a noise source which cannot be regulated by the local jurisdiction due to existing state or federal regulations already applying to the source. Examples of such sources are vehicles operated on public roadways, railroad trains and aircraft.

**"Pure Tone Noise"** means any noise which is distinctly audible as a single pitch (frequency) or set of pitches. For the purposes of this document, a pure tone shall exist if the one-third octave band sound pressure level in the band with the tone exceeds the arithmetic average of the sound pressure levels of the two contiguous one-third octave bands by 5 dB for center frequencies of 500 Hz and above and by 8 dB for center frequencies between 160 and 400 Hz and 15 dB for center frequencies less than or equal to 125 Hz.

## **2.0 EXISTING AND FUTURE NOISE ENVIRONMENT**

### **2.1 Overview of Sources**

Based on discussion with County of Stanislaus Department of Planning and Community Development staff regarding potential major noise sources and field studies conducted by Brown Buntin Associates (1986) and updated by Illingworth & Rodkin (2004), it was determined that there are a number of potentially significant sources of community noise within Stanislaus County. These sources include traffic on state highways and major County roadways, railroad operations, airport operations and industrial activities. Specific noise sources selected for study are described in the Technical Reference Document.

### **2.2 Methods and Noise Exposure Maps**

The California Department of Transportation (Caltrans) Noise Prediction Model LeqV2 was used in conjunction with field noise level measurements to develop L<sub>dn</sub> contours for the state highways and major county roadways within the unincorporated areas of Stanislaus County. Annual average daily traffic volumes (AADT) and truck mixes for existing (2000) and future (2030) conditions were obtained from Caltrans and the Stanislaus County Department of Public Works. CNEL contours for operations at the Oakdale Municipal Airport and the Modesto City/County Airport were derived from existing Airport Master Plan reports.

Tabulated existing noise contours for the major railroad lines throughout the county are shown in Table 1. Figure 1 shows the locations and generalized L<sub>dn</sub> 2030 noise contours of major roadway noise sources. Noise exposure contours for major transportation sources of noise within the unincorporated areas of Stanislaus County are also contained within Appendix A (Existing Noise Sources) and B (Future Noise Sources) of the Technical Reference Document (2004). Generalized

$L_{dn}$  noise contours of major industrial noise sources can be found in Part C-7 (Existing Noise Environment, Industrial and Other Stationary Noise Sources) of the Technical Noise Document (2004). It should be noted that these contours are generally based upon annual average conditions, and are not intended to be site-specific where local topography, vegetation or intervening structures may significantly affect noise exposure at a particular location. The noise contour maps have been prepared to assist Stanislaus County with the implementation of the Noise Element through the project review and long range planning processes.

### **3.0 COMMUNITY NOISE SURVEY**

As required by the Government Code and ONC Guidelines, a community noise survey was conducted to document noise exposure in areas of the County containing noise sensitive land uses. The following noise sensitive land uses have been identified within Stanislaus County:

1. Residential uses in Single-Family Residential, Medium-Density Residential and Multiple-Family Residential zones.
2. Schools
3. Long-term care medical facilities, such as hospitals, nursing homes, etc.

Noise monitoring sites were selected to be representative of typical conditions in the unincorporated areas of the County where noise sensitive land uses are located. A combination of short-term and long-term (24-hour) noise monitoring was used to document existing noise levels at these locations during July and August of 2004. A total of 30 monitoring sites were selected, including 20 long-term noise measurements and 10 short-term noise measurements. Measurement locations are shown in Figure 2.

Long-term noise measurements were conducted to show the daily trend in noise levels throughout a 24-hour to 48-hour period. Noise level data collected during continuous monitoring included the  $L_{eq}$ , maximum noise level and the statistical distribution of noise levels for each hour of the sample period. The hourly fluctuations of noise levels at the long-term sites are summarized in graphic form in Appendix A of the Technical Reference Document (2004).

Short-term noise measurements were conducted in simultaneous intervals with traffic volume and speed observations.  $L_{dn}$  noise levels at each receiver were calculated by adjusting for differences in traffic conditions during measurements and the loudest existing hourly traffic conditions (based on the existing AADT traffic volumes). The data collected during the short-term sampling program included the  $L_{eq}$ , maximum noise level, minimum noise level and a description of major sources of noise which were audible. Long and short-term measured noise level data collected during the community noise survey are summarized in Tables 2 and 3.

The quietest areas of unincorporated Stanislaus County are those which are removed from major transportation-related noise sources and local industrial or other stationary noise sources. Good examples of these quiet areas are rural areas such as Hickman, Valley Home, and La Grange. The noisier areas surveyed were those located near state highways (Salida), major county roadways (Westport and Shackelford), or railroads (Empire). Typically, maximum noise levels observed during the survey were generated by local automobile traffic or heavy trucks. Other sources of maximum noise levels included occasional aircraft over flights and, in some areas, railroad operations (especially horns). Background noise levels in the absence of the above-described sources were caused by distant traffic, wind in the trees, running water, birds and distant industrial or other stationary noise sources.

#### 4.0 LAND USE COMPATIBILITY GUIDELINES

Figure 3 is provided as reference concerning the sensitivity of different land uses to their noise environment. It is intended to illustrate the range of noise levels which will allow the full range of activities normally associated with a given land use. For example, exterior noise levels in the range of 50-60 L<sub>dn</sub> (or CNEL) are generally considered acceptable for residential land uses, since these levels will usually allow normal outdoor and indoor activities such as sleep and communications to occur without interruption. Industrial facilities, however, can be relatively insensitive to noise and may generally be located in a noise environment of up to 75 L<sub>dn</sub> (or CNEL) without significant adverse effects. Specific noise compatibility criteria in terms of L<sub>dn</sub> or CNEL for residential and noise sensitive land uses in Stanislaus County are defined in Section 5.0.

**Table 1: Noise Contour Distances for Major Railroad Lines (2004)**

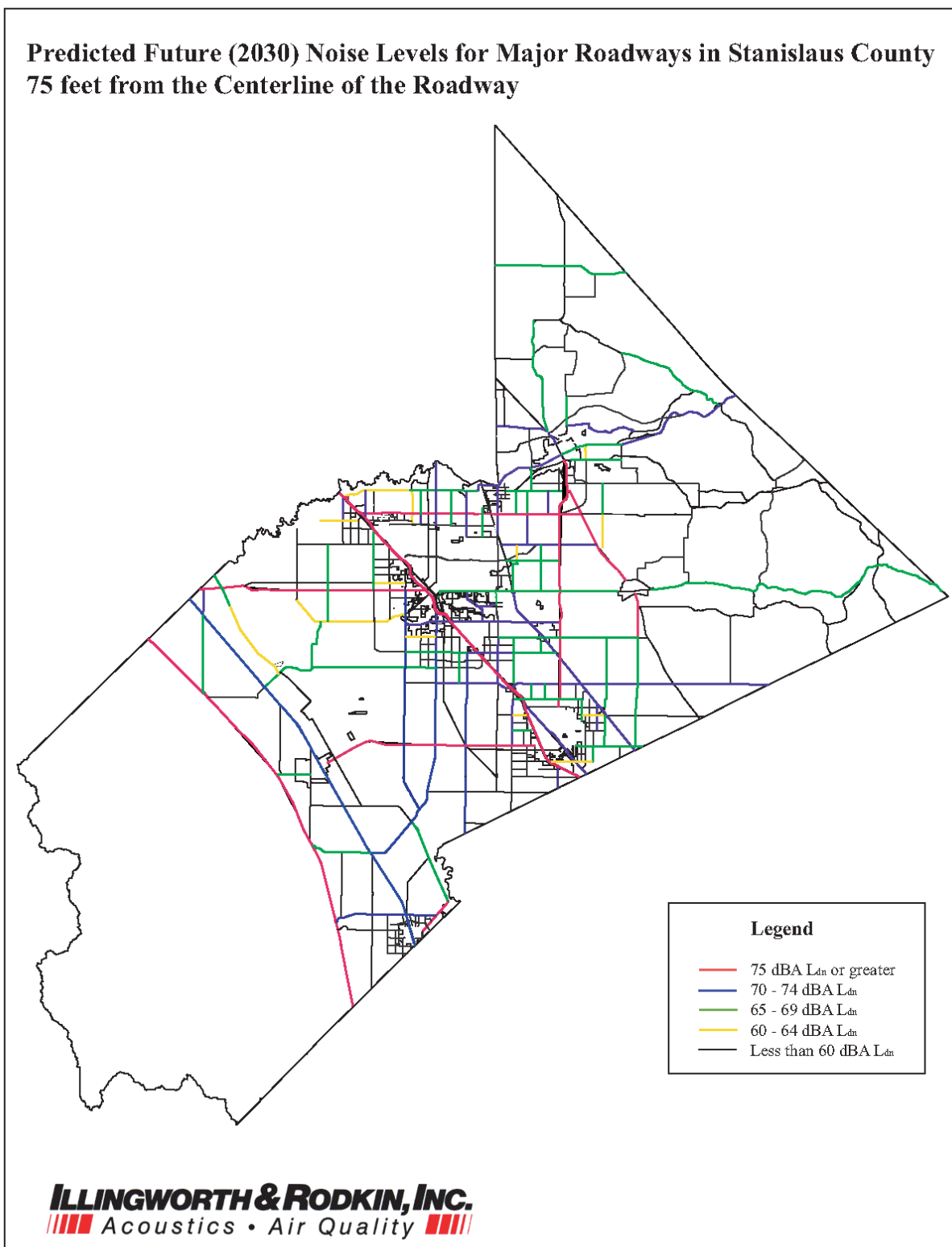
| Railroad Description*                              | Distance from Centerline of Roadway (in feet)<br>Based on Traffic Noise Modeling |        |        |        |
|--|--|--------|--------|--------|
|  | 75-Ldn   | 70-Ldn | 65-Ldn | 60-Ldn |
| Union Pacific Railroad (UPRR)                      | 70   | 150    | 320    | 680    |
| Burlington Northern and Santa Fe (BN & SF) Railway | 100  | 200    | 440    | 950    |
| Sierra Railroad                                    | **   | **     | **     | 80     |
| Tidewater Southern Railroad                        | **   | **     | 60     | 140    |

*\* Noise contour distances for the Modesto and Empire Traction Company Railroad were not calculated due to a lack of specific information regarding train movements along this track.*

*\*\* Distances of less than 50 feet are not included in this table.*

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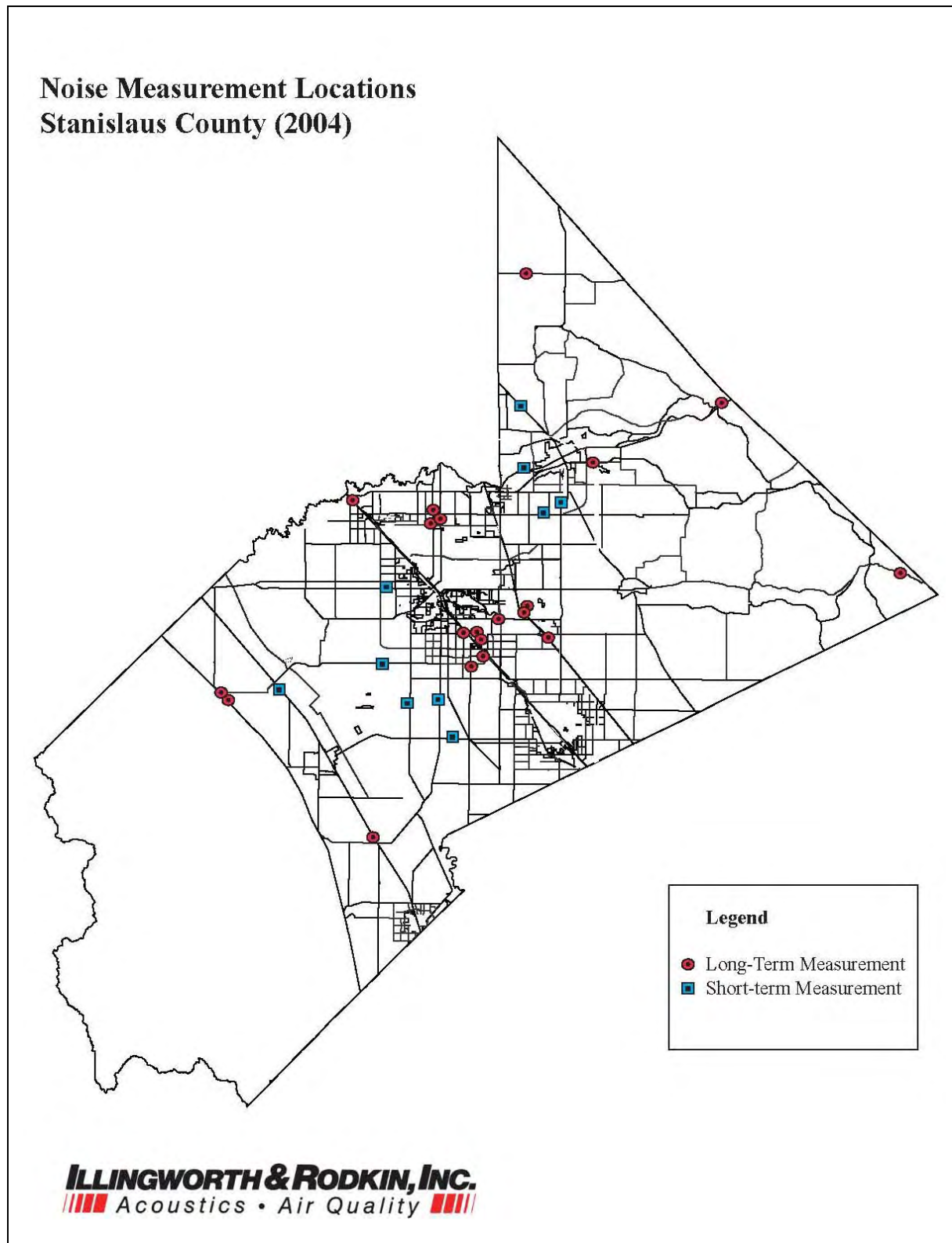
**Figure 1: Noise Contours for Major Roadways (2030)**



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**Figure 2: Community Noise Survey Monitoring Sites**



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**Table 2: Summary of Long-Term Noise Measurements**

| Site                   | Location   | Date               | Time                 | Daytime Noise Levels | Nighttime Noise Levels | $L_{dn}$  |
|------------------------|--|--------------------|----------------------|----------------------|------------------------|-----------|
| Long-Term Measurements |  |                    |                      | dBA                  | dBA                    | dBA       |
| LT-1                   | Residential Land Use, 907 Kiernan Road<br>~ 60 ft from the centerline of Hwy 219 /Kiernan Road | 7/20/04 to 7/21/04 | 11:00 am to 1:00 pm  | 65-68                | 56-65                  | <b>68</b> |
| LT-2                   | ~50 feet from the centerline of Hwy 108, near intersection with Hwy 219                        | 7/20/04 to 7/21/04 | 11:30 am to 12:30 pm | 71-74                | 64-73                  | <b>76</b> |
| LT-3                   | ~200 feet to center of SR 99 near lane, ~350 feet to UPRR Rail line                            | 7/20/04 to 7/22/04 | 12:20 pm to 2:30 pm  | 72-75                | 69-75                  | <b>78</b> |
| LT-4                   | ~30 feet from centerline of 132, near county line  | 7/20/04 to 7/21/04 | 12:00 pm to 4:00 pm  | 62-66                | 51-66                  | <b>68</b> |
| LT-5                   | ~50 feet from centerline of 120, near County line  | 7/20/04 to 7/21/04 | 1:00 pm to 5:00 pm   | 70-73                | 62-72                  | <b>75</b> |
| LT-6                   | ~45 feet from centerline of Hwy. 4   | 7/20/04 to 7/21/04 | 2:00 pm to 7:00 pm   | 64-67                | 54-67                  | <b>69</b> |
| LT-7                   | ~30 feet from centerline of Central Ave, south of Ceres near Grayson Road                      | 7/20/04 to 7/22/04 | 6:00 pm to 2:00 pm   | 67-70                | 59-69                  | <b>72</b> |
| LT-8                   | ~65 feet from near lane of I-5   | 7/21/04 to 7/22/04 | 11:00 am to 12:00 pm | 73-75                | 73-75                  | <b>80</b> |
| LT-9                   | ~50 feet from centerline of SR 33, north of Crows Landing                                      | 7/21/04 to 7/22/04 | 11:30 am to 1:00 pm  | 66-70                | 57-69                  | <b>72</b> |
| LT-10a                 | ~50 feet from the centerline of Santa Fe Ave., near Leedom                                     | 7/21/04 to 7/22/04 | 3:30 pm to 4:00 pm   | 68-75                | 62-76                  | <b>78</b> |
| LT-10b                 | ~50 feet from the centerline of Santa Fe Avenue at Leedom                                      | 8/31/04 to 9/2/04  | 2:00 pm to 2:00 pm   | 69-75                | 60-74                  | <b>76</b> |
| LT-11                  | 3831 Hatch Road, ~65 feet from centerline of Hatch Road  | 7/21/04 to 7/22/04 | 3:30 pm to 4:00 pm   | 68-71                | 62-71                  | <b>74</b> |
| LT-12                  | ~20 feet west of SPTCo Railroad and ~105 feet west of SR 99, in Ceres                          | 5/18/04 to 5/21/04 | 12:30 pm to 2:00 pm  | 77-81                | 71-79                  | <b>83</b> |
| LT-13                  | ~30 feet from the edge of Service Road, at Service and Moffet in Ceres                         | 5/18/04 to 5/21/04 | 1:00 pm to 2:00 pm   | 69-73                | 62-73                  | <b>75</b> |
| LT-14                  | 2805 Evalee Lane<br>~270 feet east of SR 99, in Ceres  | 5/18/04 to 5/20/04 | 1:30 pm to 3:00 pm   | 66-69                | 60-69                  | <b>72</b> |
| LT-15                  | Little Orchard Mobile Home Park<br>~130 feet east of SR 99, in Ceres                           | 5/18/04 to 5/20/04 | 2:30 pm to 3:00 pm   | 72-74                | 64-73                  | <b>78</b> |
| LT-16                  | ~60 feet from near lane of I-5 in Westley  | 8/31/04 to 9/2/04  | 10:30 am to 10:30 am | 72-74                | 71-75                  | <b>80</b> |
| LT-17                  | ~150 feet from AT&SF Railroad in Hughson   | 8/31/04 to 9/2/04  | 1:00 pm to 2:00 pm   | 69-80                | 59-80                  | <b>81</b> |
| LT-18                  | ~50 feet from the Sierra Railroad tracks east of Oakdale                                       | 8/31/04 to 9/2/04  | 3:00 pm to 3:00 pm   | 66-71                | 58-70                  | <b>72</b> |
| LT-19                  | ~35 feet from the Tidewater Railroad, south of Del Rio   | 8/31/04 to 9/2/04  | 4:00 pm to 4:00 pm   | 63-70                | 43-63                  | <b>70</b> |

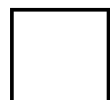
**Table 3: Summary of Short-Term Noise Measurements**

| Site                    | Location  | Date    | Time                 | L <sub>eq</sub> | L <sub>1</sub> | L <sub>10</sub> | L <sub>50</sub> | L <sub>90</sub> |
|-------------------------|---|---------|----------------------|-----------------|----------------|-----------------|-----------------|-----------------|
| Short-Term Measurements |   |         |                      | dB<br>A         | dBA            | dBA             | dBA             | dBA             |
| ST-1                    | ~75 feet from the centerline of Maze Blvd/ Hwy. 132 at Garrison           | 7/20/04 | 12:55 pm to 1:00 pm  | 71              | 81             | 76              | 66              | 50              |
| ST-2                    | ~75 feet from the centerline of Grayson Road, east of Jennings Road       | 7/20/04 | 1:48 pm to 1:58 pm   | 61              | 75             | 63              | 45              | 37              |
| ST-3                    | ~80 feet from the centerline of Carpenter Road, at Monte Vista Avenue     | 7/20/04 | 2:22 pm to 2:32 pm   | 64              | 74             | 68              | 54              | 44              |
| ST-4                    | ~60 feet from the centerline of West Main Street, west of Blaker Road     | 7/20/04 | 3:00 pm to 3:10 pm   | 68              | 77             | 72              | 62              | 49              |
| ST-5                    | ~60 feet from the centerline of Crows Landing Road, at Zeering            | 7/20/04 | 3:33 pm to 3:43 pm   | 67              | 78             | 70              | 60              | 48              |
| ST-6                    | ~40 feet from the centerline of SR 33, south of Westley                   | 7/21/04 | 10:50 am to 11:00 am | 71              | 81             | 75              | 60              | 47              |
| ST-7                    | ~50 feet from the centerline of Albers, between Patterson and Claribel    | 7/21/04 | 5:50 pm to 6:00 pm   | 72              | 82             | 76              | 67              | 54              |
| ST-8                    | ~50 feet from the centerline of Claribel, between Albers and Hwy. 108     | 7/21/04 | 6:15 pm to 6:25 pm   | 69              | 78             | 74              | 62              | 50              |
| ST-9                    | ~60 feet from the centerline of Hwy. 108, at Orchard Ave.                 | 7/21/04 | 6:40 pm to 6:50 pm   | 70              | 77             | 74              | 69              | 56              |
| ST-10                   | ~60 feet from the centerline of Valley Home Rd, at 12542 Valley Home Road | 7/21/04 | 7:10 pm to 7:20 pm   | 65              | 76             | 71              | 52              | 42              |

**Figure 3: Land Use Compatibility for Community Noise Environments**

| Land Use Category  | Exterior Noise Exposure<br>L <sub>dn</sub> or CNEL, dBA |    |    |    |    |    |
|--|---|----|----|----|----|----|
|  | 55  | 60 | 65 | 70 | 75 | 80 |
| Residential - Low Density Single Family, Duplex, and Mobile Homes              |   |    |    |    |    |    |
| Multi Family Residential   |   |    | *  |    |    |    |
| Hotels and Motels  |   |    |    |    |    |    |
| Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches |   |    |    |    |    |    |
| Auditoriums, Concert Halls, and Amphitheaters                                  |   |    |    |    |    |    |
| Sports Arena and Outdoor Spectator Sports                                      |   |    |    |    |    |    |
| Playgrounds and Neighborhood Parks   |   |    |    |    |    |    |
| Golf Courses, Riding Stables, Water Recreation, and Cemeteries                 |   |    |    |    |    |    |
| Office Buildings, Business Commercial, and Professional                        |   |    |    |    |    |    |
| Industrial, Manufacturing, Utilities, and Agriculture                          |   |    |    |    |    |    |

*\* Interior noise levels shall not exceed 45 Ldn in all new residential units (single and multi family). Development sites exposed to noise levels exceeding 60 Ldn shall be analyzed following protocols in Appendix Chapter 12, Section 1208, A, Sound Transmission Control, 1998 California Building Code.*



**NORMAL ACCEPTABLE**

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special insulation requirements.



**CONDITIONALLY ACCEPTABLE**

Specified land use may be permitted only after detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.



**NORMALLY UNACCEPTABLE**

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



**CLEARLY UNACCEPTABLE**

New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies.

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## GOALS, POLICIES AND IMPLEMENTATION MEASURES

### GOAL ONE

Prevent the encroachment of incompatible land uses near known noise producing industries, railroads, airports and other sources to protect the economic base of the County.

#### POLICY ONE

It is the policy of Stanislaus County to utilize the noise exposure information contained within the General Plan to identify existing and potential noise conflicts through the Land Use Planning and Project Review processes.

#### IMPLEMENTATION MEASURE

1. Areas within Stanislaus County shall be designated as noise-impacted if exposed to existing or projected future noise levels exterior to buildings exceeding the standards in Figure 3 or the performance standards described by Table 4. Maps showing existing and projected future noise exposures exceeding 60 L<sub>dn</sub> or CNEL for the major noise sources are depicted in Figure 1, Table 1, and are included in Appendix A and B of the Technical Reference Document (2004).  
**Responsible Departments: Environmental Resources, Planning Department, Planning Commission, Board of Supervisors**

### GOAL TWO

Protect the citizens of Stanislaus County from the harmful effects of exposure to excessive noise.

#### POLICY TWO

It is the policy of Stanislaus County to develop and implement effective measures to abate and avoid excessive noise exposure in the unincorporated areas of the County by requiring that effective noise mitigation measures be incorporated into the design of new noise generating and new noise sensitive land uses.

#### IMPLEMENTATION MEASURES

1. New development of noise-sensitive land uses will not be permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to the following levels:
  - a) For transportation noise sources such as traffic on public roadways, railroads, and airports, 60 L<sub>dn</sub> (or CNEL) or less in outdoor activity areas of single family residences,

65 L<sub>dn</sub> (or CNEL) or less in community outdoor space for multi-family residences, and 45 L<sub>dn</sub> (or CNEL) or less within noise sensitive interior spaces. Where it is not possible to reduce exterior noise due to these sources to the prescribed level using a practical application of the best available noise-reduction technology, an exterior noise level of up to 65 L<sub>dn</sub> (or CNEL) will be allowed. Under no circumstances will interior noise levels be allowed to exceed 45 L<sub>dn</sub> (or CNEL) with the windows and doors closed in residential uses.

- b) For other noise sources such as local industries or other stationary noise sources, noise levels shall not exceed the performance standards contained within Table 4.

**Responsible Departments: Environmental Resources, Planning Department, Building Inspections, Planning Commission, Board of Supervisors**

- 2. New development of industrial, commercial or other noise generating land uses will not be permitted if resulting noise levels will exceed 60 L<sub>dn</sub> (or CNEL) in noise-sensitive areas. Additionally, the development of new noise-generating land uses which are not preempted from local noise regulation will not be permitted if resulting noise levels will exceed the performance standards contained within Table 4 in areas containing residential or other noise sensitive land uses.

**Responsible Departments: Environmental Resources, Planning Department, Planning Commission, Board of Supervisors**

**TABLE 4**

**MAXIMUM ALLOWABLE NOISE EXPOSURE - STATIONARY NOISE SOURCES<sup>2</sup>**

|                                   | <b>Daytime<br/>7 a.m. to 10 p.m.</b> | <b>Nighttime<br/>10 p.m. to 7 a.m.</b> |
|-----------------------------------|--------------------------------------|--|
| <b>Hourly L<sub>eq</sub>, dBA</b> | <b>55</b>                            | <b>45</b>                              |
| <b>Maximum level, dBA</b>         | <b>75</b>                            | <b>65</b>                              |

Each of the noise level standards specified in Table 4 shall be reduced by five (5) dBA for pure tone noises, noise consisting primarily of speech or music, or for recurring impulsive noises. The standards in Table 4 should be applied at a residential or other noise-sensitive land use and not on the property of a noise-generating land use. Where measured ambient noise levels exceed the standards, the standards shall be increased to the ambient levels.

- 3. Prior to the approval of a proposed development of noise-sensitive land uses in a noise impacted area, or the development of industrial, commercial or other noise generating land use in an area containing noise-sensitive land uses, an acoustical analysis shall be required. Where required, an acoustical analysis shall:

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<sup>2</sup> As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.



- a) Be the responsibility of the applicant.
- b) Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics.
- c) Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
- d) Include estimated noise levels in terms of  $L_{dn}$  (or CNEL) and the standards of Table 4 (if applicable) for existing and projected future (10-20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element.
- e) Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element.
- f) Include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, a rationale for acceptance of the project must be provided.

***Responsible Departments: Planning Department, Environmental Resources, Planning Commission, Board of Supervisors***

- 4. Projects which through the CEQA review process require an acoustical analysis shall include a monitoring program to specifically implement the recommended mitigation to noise impacts associated with the project.

***Responsible Departments: Planning Department, Environmental Resources, Planning Commission, Board of Supervisors***

- 5. Noise level criteria applied to land uses other than noise sensitive uses shall be consistent with the recommendations of Figure 3: Land Use Compatibility for Community Noise Environments.

***Responsible Department: Planning Department, Environmental Resources, Planning Commission, Board of Supervisors***

- 6. Stanislaus County shall enforce Sound Transmission Control Standards in the 1998 California Building Code, Appendix Chapter 12, Section 1208, and Chapter 35 of the Uniform Building Code concerning the construction of new multiple-occupancy dwellings such as hotels, apartments, and condominiums in areas where the existing or projected future noise environment exceeds 60  $L_{dn}$  or CNEL.

***Responsible Department: Building Inspection***

- 7. Replacement of noise-sensitive land uses located in noise-impacted areas which are destroyed in a disaster shall not be considered in conflict with this element if replacement occurs within one year.

***Responsible Departments: Building Inspections, Planning Department, Environmental Resources.***

### **POLICY THREE**

It is the objective of Stanislaus County to protect areas of the County where noise-sensitive land uses are located.

## IMPLEMENTATION MEASURES

1. Require the evaluation of mitigation measures for projects that would cause the  $L_{dn}$  at noise-sensitive uses to increase by 3 dBA or more and exceed the “normally acceptable” level, cause the  $L_{dn}$  at noise-sensitive uses to increase 5 dBA or more and remain “normally acceptable,” or cause new noise levels to exceed the noise ordinance limits (after adoption).  
**Responsible Departments: Environmental Resources, Planning Department, Planning Commission, Board of Supervisors**
2. In conjunction with or subsequent to a comprehensive update of the Noise Element, the County shall consider writing a community noise control ordinance based on the noise exposure information included in the research for the Noise Element. The "Model Community Noise Control Ordinance" prepared by the State Office of Noise Control should be considered for a guideline.  
**Responsible Departments: Environmental Resources, Planning Department, Planning Commission, Board of Supervisors**
3. New equipment and vehicles purchased by Stanislaus County shall comply with noise level performance standards of the industry and be kept in proper working order to reduce noise impacts.  
**Responsible Department: County Executive Office**
4. Stanislaus County should encourage the California Highway Patrol and local law enforcement officers to actively enforce existing sections of the California Vehicle Code relating to adequate vehicle mufflers<sup>3</sup>, modified exhaust systems, and vehicle stereo systems<sup>4</sup>.  
**Responsible Department: Board of Supervisors**

## POLICY FOUR

It is the objective of Stanislaus County to ensure that the Noise Element is consistent with and does not conflict with other elements of the Stanislaus County General Plan.

## IMPLEMENTATION MEASURES

1. The Noise Element shall be reviewed and updated as necessary to remain consistent with the Land Use and Circulation Elements of the General Plan.  
**Responsible Departments: Planning Department, Department of Environmental Resources, Planning Commission, Board of Supervisors**
2. The Land Use and Circulation Elements of the General Plan shall be continually reviewed to ensure consistency with the findings and policies of the Noise Element as they relate to the prevention of future noise conflicts.  
**Responsible Department: Planning Department**

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<sup>3</sup> Section 27150 of the California Motor Vehicle Code discusses the control of excessive exhaust noise.

<sup>4</sup> Section 27007 of the California Motor Vehicle Code prohibits amplified sound which can be heard 50 or more feet from a vehicle.