

## **Appendix I-D**

# **STANISLAUS COUNTY DISADVANTAGED UNINCORPORATED COMMUNITIES REPORT**

# STANISLAUS COUNTY DISADVANTAGED UNINCORPORATED COMMUNITIES REPORT

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## Acronyms and Abbreviations

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|              |   |
|--------------|---|
| AB           | Assembly Bill                                     |
| ACE          | Altamont Commuter Express                         |
| AGS          | Applied Geographic Solutions                      |
| BART         | Bay Area Rapid Transit                            |
| CAT          | Ceres Area Transit                                |
| CDP          | Census-Designated Place                           |
| CHA          | Community Health Assessment of Stanislaus County  |
| CSA          | County Service Area                               |
| CSD          | County Service Area                               |
| DUC          | disadvantaged unincorporated community            |
| FBI          | Federal Bureau of Investigation                   |
| FPD          | Fire Protection District                          |
| General Plan | <i>Stanislaus County General Plan</i>             |
| GHG          | greenhouse gas                                    |
| GIS          | geographic information system                     |
| I-5          | Interstate 5                                      |
| LAFCO        | Local Agency Formation Commissions                |
| LEB          | life expectancy at birth                          |
| LOS          | level of service                                  |
| MAX          | Modesto Area Express                              |
| MCL          | maximum contaminant level                         |
| P-D          | Planned Development District                      |
| PM           | particulate matter                                |
| PM10         | particulate matter of 10 microns or less          |
| PM2.5        | particulate matter of 2.5 microns or less         |
| SB           | Senate Bill                                       |
| SJVAB        | San Joaquin Valley air basin                      |
| SJVAPCD      | San Joaquin Valley Air Pollution Control District |
| SOI          | sphere of influence                               |
| SR           | State Route                                       |
| StaRT        | Stanislaus Regional Transit                       |
| WSID         | Westside Irrigation District                      |

## Chapter 1

# Background and Overview of Statutory Requirements

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Senate Bill (SB) 244 of 2011 mandates that city and county general plans consider disadvantaged unincorporated communities (DUCs) and the availability of services to such communities. SB 244 states, in part: “It is the intent of the Legislature to encourage investment in these communities and address the complex legal, financial, and political barriers that contribute to regional inequity and infrastructure deficits within disadvantaged unincorporated communities.” SB 244 also establishes requirements for Local Agency Formation Commissions (LAFCO) to consider DUCs relating to agency formation and annexation proposals, and as part of their municipal service reviews.

Accordingly, the general plan must include analyses of the water, wastewater, stormwater drainage, and structural fire protection needs or deficiencies of those communities, and a discussion of benefit assessment districts or other financing alternatives that could make the extension of services to such communities financially feasible (Government Code Section 65302.10).

Responsibility for addressing the concerns of DUCs is split between cities and counties, depending on the location and age of such communities. Government Code Section 65302.10(b)(1) provides that a county must include “an identification of each legacy community within the boundaries of the county that is a disadvantaged unincorporated community, but not including any area within the sphere of influence of any city. This identification shall include a description of the community and a map designating its location.” *Community* is defined as “an inhabited area within a city or county that is comprised of no less than 10 dwellings adjacent or in close proximity to one another.” *Legacy community* is defined as “a geographically isolated community that is inhabited and has existed for at least 50 years.”

The selection criteria for DUCs subject to Stanislaus County jurisdiction are as follows:

- Identified community (Census-Designated Place, or CDP), with distinguishable boundaries, located within the unincorporated area of the county.
- Developed, with 10 dwellings, or 12 or more registered voters.
- Annual median income of households is less than 80% of the statewide median household income.
- Outside of the sphere of influence of any city.

As defined under Government Code Section 65302.10, the DUCs within Stanislaus County that fall within the responsibility of the *Stanislaus County General Plan* (General Plan) are listed below and shown in Figure 1-1, *Disadvantaged Unincorporated Communities in Stanislaus County*.

- Cowan Tract.
- Crows Landing.
- Grayson.
- Keyes.
- Monterey Park Tract.

- Riverdale Park Tract.
- Westley.

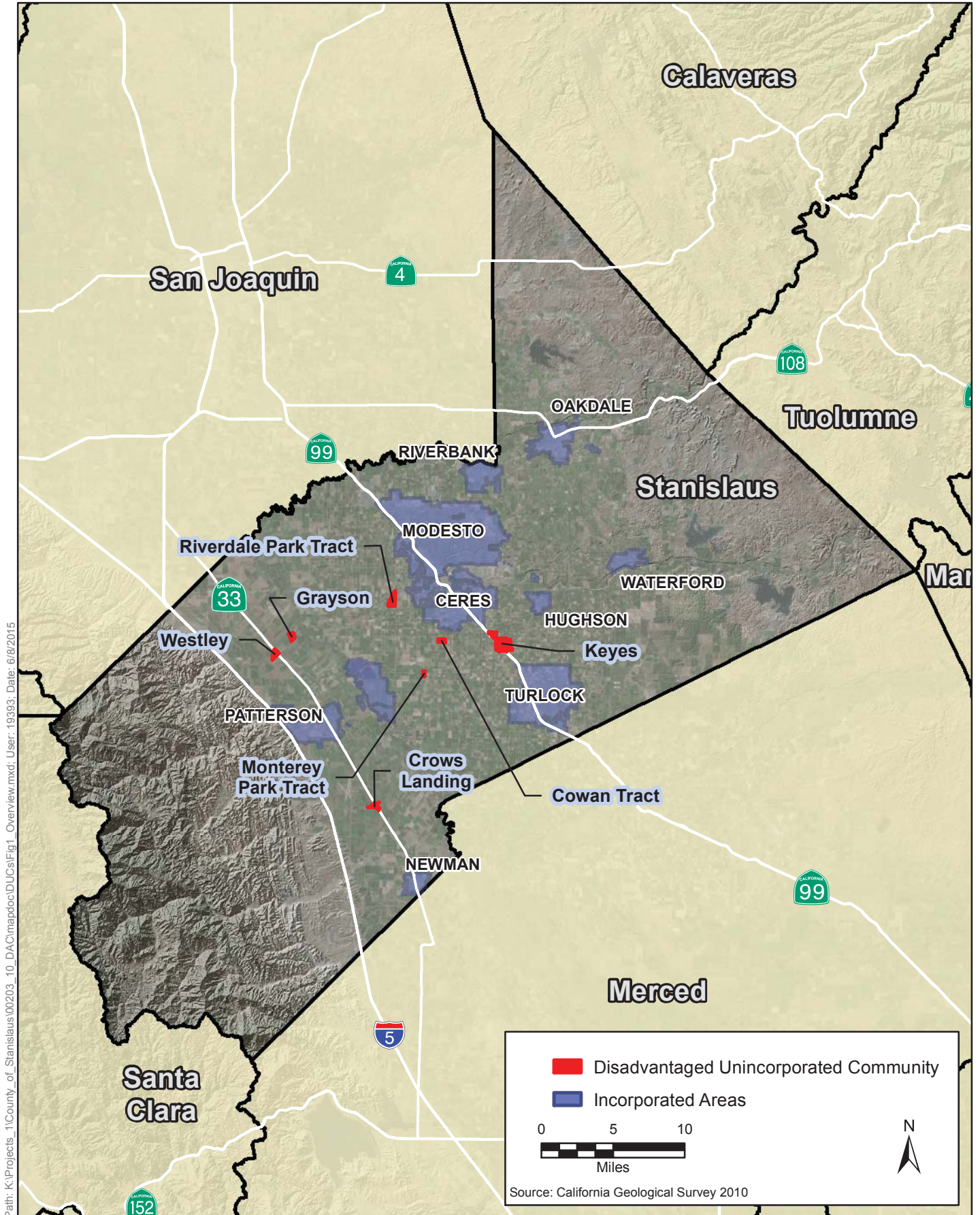
These DUCs are the subject of this report, which compiles information from various sources to characterize the conditions in each DUC. This includes geographic information system (GIS) files for infrastructure, the most recent Municipal Service Reviews prepared by the Stanislaus County LAFCO, and available health information. There is no community-specific health information available; consequently, the DUCs are discussed in the context of the nine geographic areas by which the information is presented in the 2013 *Community Health Assessment of Stanislaus County* prepared by the Stanislaus County Health Services Agency. The references used in Chapter 2, *Existing Conditions*, are identified after the discussion of each DUC.

This report was prepared with partial funding from a grant from the California Strategic Growth Council and goes beyond the basic provisions of SB 244, which specifically requires consideration of water, wastewater, stormwater drainage, and structural fire protection needs or deficiencies. In addition to those services and in order to meet the requirements of the California Strategic Growth Council grant, this report includes information on air quality, public health issues, and the presence or absence of additional factors, such as community services, that result from or contribute to a community's general health.

The report is organized in the following chapters:

- Chapter 1, *Background and Overview of Statutory Requirements*
- Chapter 2, *Existing Conditions*, documents the existing infrastructure, services, and chronic health issues for each of the identified DUCs
- Chapter 3, *Community Assets and Deficits*, describes the condition of infrastructure and services for each DUC
- Chapter 4, *Healthy Communities Strategies*, recommends a number of policies that will further the development of healthy communities.





**Figure 1-1**  
**Disadvantaged Unincorporated Communities**  
**in Stanislaus County**



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## Chapter 2

# Existing Conditions, By Community

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## 2.1 Cowan Tract

### 2.1.1 General Characteristics and Demographics

Located approximately 1 mile southwest of the city of Ceres, Cowan Tract is a rural neighborhood primarily comprised of mobile homes. Cowan Tract is a CDP with a 2010 census population of 318 people in 94 households and an average household size of 3.38 persons (United States Census Bureau 2013a). The median annual household income in California was \$60,190 in 2013; it was \$39,563 in Cowan Tract (United States Census Bureau 2013b). In 2010, Cowan Tract had 102 housing units, 94 of which were occupied (United States Census Bureau 2013a).

At 102 acres, the Cowan CDP occupies a larger area than the 78-acre area identified as the Cowan Tract DUC described below and encompasses approximately 24 acres of agricultural land immediately south of the DUC. All of the land immediately surrounding the Cowan Tract DUC is zoned General Agriculture, with a 40-acre minimum parcel size (A-2-40) (Stanislaus County 2014d). The western part of the agricultural land is classified by the California Department of Conservation's Important Farmlands Inventory as "semi-agricultural and rural commercial land," defined as "farmsteads, agricultural storage and packing sheds, unpaved parking areas, composting facilities, equine facilities, firewood lots, and campgrounds" (California Department of Conservation 2014); most of this area is also under Williamson Act contract (California Department of Conservation 2012). The eastern portion of the agricultural acreage is non-Williamson Act contracted prime farmland (California Department of Conservation 2012 and 2014). These agricultural lands do not support the requisite intensity of existing development for SB 244 consideration and are unlikely to develop; therefore, they are not included as part of the Cowan Tract DUC residential community evaluated for SB 244 purposes.

Cowan Tract DUC is defined by San Joaquin Street on the north, the Union Pacific Railroad tracks on the east, Lathrop Street on the south, and Crows Landing Road on the west. Turlock Irrigation District's Lower Lateral No. 2½ parallels the south side of Lathrop Street, separating Cowan Tract from neighboring farmland to the south. The area is surrounded by agricultural land and accompanying agriculture-related residences, with the exception of the driving range/9-hole golf course located immediately north of Cowan Tract's northwest corner.

The General Plan's Housing Element identifies Cowan Tract as a Residential Development Potential Study Area, noting that Cowan Tract does not have the potential to accommodate additional housing units (Stanislaus County 2012). Existing infrastructure and services for Cowan Tract—like many rural areas—are limited; these are described below.

### 2.1.2 Infrastructure, Utilities, and Services

Infrastructure, utilities, and services considered for the Cowan Tract DUC are presented in Figure 2-1, *Cowan Tract Disadvantaged Unincorporated Community*, and include transportation facilities and services including roads, sidewalks, street lighting, and bus stops/service; water,



wastewater, and storm drainage systems; solid waste disposal; public safety services such as law enforcement and fire protection; and access to community amenities and services such as schools, parks, and grocery stores. Data associated with chronic health conditions and air quality are described at a regional level because they are not available for Cowan Tract DUC specifically.

### 2.1.3 Transportation Facilities and Services

Cowan Tract lies approximately 4 miles west of State Route (SR) 99, a major north-south travel corridor and a six-lane freeway in Stanislaus County. Transportation infrastructure in the immediate Cowan Tract area consists of a mixture of public, County-maintained roads and privately maintained roadways, and railroad tracks. County-maintained roads include San Joaquin Street, Crows Landing Road, the western half of Cowan Road, and the northern halves of Avenues A, B, and C. San Joaquin Street forms the DUC's northern edge and, like the roads within Cowan Tract, consists of a narrow, two-lane local road with no sidewalks, curbs, or bicycle lanes.

Crows Landing Road, adjacent to the west side of Cowan Tract, is a two-lane major roadway; in the vicinity of Cowan Tract the road currently has two lanes plus a center bidirectional turn lane (Stanislaus Council of Governments 2014). The County General Plan Circulation Element designates Crows Landing Road as a four-lane expressway, a category of road intended to move high volumes of people and goods between urban areas within the county at higher speeds (Stanislaus County 2006). The level of service (LOS) on that segment of Crows Landing Road has not been recorded; however, the segment between Grayson Road (0.25 mile north of Cowan Tract) and Service Road (1.25 miles north of Cowan Tract) operates at LOS D, below Stanislaus County's LOS C goal and at the minimum adopted level of service allowed by the General Plan (Stanislaus County 2006; Stanislaus Council of Governments 2014). Crows Landing Road, including the segment adjacent to Cowan Tract, is proposed for widening and designated in the draft Circulation Element as a future six-lane expressway (County of Stanislaus (no date) Stanislaus Council of Governments 2014).

The 2013 *Stanislaus County Non-Motorized Facilities Master Plan* identifies Crows Landing Road north of Cowan Tract as 1 of 10 countywide first-tier—or high-priority—bikeways scheduled for improvement (Stanislaus Council of Governments 2013). Adjacent to and south of Cowan Tract, Crows Landing Road is designated as a planned Class 3 bikeway (Stanislaus Council of Governments 2013).

Within the Cowan Tract DUC, private roads that are not maintained by the County include Avenues A, B, and C south of Cowan Street; Cowan Street east of Avenue C; and the entirety of Avenue D and Lathrop Street—all of these are two-lane local roads. No sidewalks are present on any of the Cowan Tract roads, and there are no designated bicycle lanes beyond those on Crows Landing Road.

No curbs, gutters, or street lights are present on the roadways in and around Cowan Tract (Stanislaus County 2012). The Union Pacific railroad tracks extend north-south immediately east of Cowan Tract.

Bus service within Cowan Tract is limited to the Turlock–Modesto Shuttle, which provides four roundtrips between Turlock and Modesto, with curbside service, to the general public Monday–Saturday between 7:00 a.m. and 6:30 p.m. (Stanislaus Regional Transit 2014a).

The nearest fixed bus routes to Cowan Tract are Ceres Area Transit (CAT) Route B, Modesto Area Express (MAX) Route 42, and Stanislaus Regional Transit (StaRT) Route 40 (City of Ceres 2014; City of Modesto 2014; Stanislaus Regional Transit 2014a). CAT Route B runs buses nine times per day,



Figure 2-1  
Cowan Tract Disadvantaged Unincorporated Community



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Monday–Friday, connecting Ceres and Modesto between the hours of 8:15 a.m. and 6:10 p.m.; no weekend service is provided on CAT Route B (City of Ceres 2013). The nearest CAT Route B bus stop is approximately 1.25 miles north of Cowan Tract at the northeast corner of Crows Landing and Service Roads. MAX Route 42 provides bus service every 30 minutes between the hours of 5:51 a.m. and 7:59 p.m. Monday–Saturday and 8:45 a.m.–6:40 p.m. on Sundays; the nearest MAX bus stop to Cowan Tract is 1.75 miles north at the Stanislaus County Community Services Agency/Community Safety Center facility on Hackett Road (City of Modesto 2009c). All CAT and MAX buses are equipped with bicycle racks (City of Modesto 2009a; City of Ceres 2014). StaRT Route 40 connects Modesto, Grayson, Westley, and Patterson, and passes 0.25 mile north of Cowan Tract on Crows Landing and Grayson Roads. StaRT Route 40 provides round trips between Modesto and Patterson; Monday–Friday, there are eight round trips, running approximately every 2 hours from 5:20 a.m. to 9:08 p.m.; on Saturdays, there are five round trips, running every 2 hours and 45 minutes from 8:15 a.m. to 8:12 p.m.; no StaRT buses run on Route 40 on Sundays (Stanislaus Regional Transit 2014b). The nearest StaRT Route 40 bus stop to Cowan Tract is 1.75 miles north at the Stanislaus County Community Services Agency/Community Safety Center facility on Hackett Road (Stanislaus Regional Transit 2014b). All three routes, CAT Route B, MAX Route 42, and StaRT Route 40, connect to Modesto’s Downtown Transportation Center, from which riders can transfer and connect to the Modesto Amtrak station, the Altamont Commuter Express (ACE) train station in Lathrop, and the Dublin Bay Area Rapid Transit (BART) station (Stanislaus Regional Transit 2014c; City of Modesto 2009b).

## 2.1.4 Water, Wastewater, and Stormwater Drainage Systems

No community services district serves Cowan Tract. Water is obtained through individual private wells, and wastewater is disposed through private septic systems (Stanislaus County 2012). Like many rural areas, storm drainage in the vicinity of Cowan Tract consists of either field percolation or roadside ditches that drain to nearby creeks. No storm drainage system serves Cowan Tract.

## 2.1.5 Solid Waste Disposal

Stanislaus County contracts with four franchised solid waste collection companies, Bertolotti Disposal, Gilton Solid Waste, Modesto Disposal/Waste Management, and Turlock Scavenger, for residential and commercial garbage collection service in unincorporated Stanislaus County (Stanislaus County 2014a). Cowan Tract falls within County-designated Franchise Area 1, served by Bertolotti Disposal (Stanislaus County 2014b). Besides providing solid waste and recyclables collection services to Franchise Area 1, Bertolotti Disposal operates a transfer station, open to the public Monday–Saturday, on Flamingo Road in Ceres. Additionally, Stanislaus County’s Fink Road Sanitary Landfill, a Class III landfill for nonhazardous municipal solid waste, is operated by the County’s Department of Environmental Resources and is open Monday–Saturday to private citizens, school districts, businesses, and local agencies for individual disposal of solid waste (Stanislaus County 2014c).

## 2.1.6 Law Enforcement and Fire Protection

Law enforcement services for Cowan Tract, as for the rest of unincorporated Stanislaus County and four contract cities, are provided by the Stanislaus County Sheriff’s Department. The nearest sheriff’s station to Cowan Tract is the main station, approximately 2.3 miles north at 250 East Hackett Road in Ceres.

The operations division of the Sheriff’s Department provides law enforcement services to over 200,000 people in a 1,521-square-mile area (Stanislaus County Sheriff’s Department 2014). Two units—patrol and investigations—comprise the Sheriff’s Department operations division. The patrol unit responds to calls for assistance, investigates crime, makes arrests, and performs preventive patrol services (Stanislaus County Sheriff’s Department 2014). The investigations unit follows up reports of major crimes, collects and prepares evidence for trials, apprehends offenders, and recovers stolen property (Stanislaus County Sheriff’s Department 2014).

The crime rates presented below were compiled by Applied Geographic Solutions (AGS) using the primary reporting categories from the Federal Bureau of Investigation (FBI) 2005 – 2010 Uniform Crime Report databases, along with preliminary 2011 release data and census data related to socioeconomic characteristics. The crimes are divided into two main categories: personal crimes (murder, rape, robbery, and assault) and property crimes (burglary, larceny, and motor vehicle theft). These crime rates are based on a comparison of the average local crime rate to the national average for the same crime, with a crime index of 100 considered average; scores above 100 are therefore considered greater, or worse, than average. For example, a score of 130 would represent a crime rate 30% greater than the national average for that type of crime. These crime rates are unweighted (i.e., a murder and a theft carry the same weight for calculation purposes) and are tracked at the census block group level and above, which may not correspond precisely to the DUC boundaries. Census blocks are the smallest geographic area for which the United States Census Bureau collects and tabulates data; a set of these constitutes a census block group. Census blocks vary widely in geographic size and are generally smaller in urban areas and progressively larger in suburban, rural, or remote areas; a given block group is larger in area and population than the individual census blocks of which it is made, and generally contains between 600 and 3,000 people (United States Census Bureau 1994). Cowan Tract DUC falls within census block group 060990030.021.

The overall personal crime and property crime indices for Cowan Tract are 141 and 85, respectively, which means that personal crimes in Cowan Tract occur at a rate 41% higher than the nationwide average, and property crimes occur at a rate of 85% of the national average. The general and individual crime indices for these categories are shown in Table 2-1 below.

**Table 2-1. Cowan Tract Crime Indices**

| Personal Crime       |     | Property Crime       |     |
|----------------------|-----|----------------------|-----|
| Personal Crime Index | 141 | Property Crime Index | 85  |
| Murder               | 166 | Burglary             | 166 |
| Rape                 | 114 | Larceny              | 97  |
| Robbery              | 67  | Motor Vehicle Theft  | 12  |
| Assault              | 187 |                      |     |

Source: Applied Geographic Solutions and Atlas Publishing 2012.

The Westport Fire Protection District (FPD) provides fire protection and emergency response services to the Cowan Tract area from its one fire station, located approximately 2.5 miles west at 5160 South Carpenter Road. The Westport fire station serves a 45-square-mile area with a staff of 17 volunteer firefighters and houses two engines, one water tender, and one rescue vehicle (Emergency Services Consulting 2007). The station’s workload, defined by the number of incidents



per year, increased from just over 100 in 1987 to about 300 in 2005 (Emergency Services Consulting 2007).

A fire department's ability to meet the fire protection needs of its service area is typically evaluated by the Insurance Services Office (ISO), a private organization that assesses risks, including fire protection, for insurance purposes. The ISO considers a variety of factors, including a district's fire-fighting apparatus, staffing, training, location, and water supply, to rate fire departments on a scale from 1 (best fire protection possible) to 10 (no fire protection). The ISO rating therefore reflects a fire department's ability to protect the residents and businesses within its service area from fire. Westport FPD has an ISO rating of 8 within a 5-mile radius of the station (Emergency Services Consulting 2007).

## 2.1.7 Schools and Community Amenities

Cowan Tract lies within the boundaries of the Ceres Unified School District, which includes a total of 22 schools serving a total of 12,742 students in grades K–12 (Ceres Unified School District 2014a). The nearest elementary school to Cowan Tract is Westport Elementary, which is 2.9 miles west at 5218 South Carpenter Road. This school serves 454 students in grades K–6 (California Department of Education 2014c; Ceres Unified School District 2013). The nearest junior high school is Blaker Kinser Junior High School, serving 612 students in grades 7 and 8, approximately 4 miles northeast of Cowan Tract at 1601 Kinser Road in Ceres. The nearest high school is Central Valley High School, 3.5 miles northeast at 4033 South Central Avenue in Ceres (California Department of Education 2014a). Central Valley High School serves 1,686 students in grades 9–12 (California Department of Education 2014b). The school district provides bus transportation to and from school for students living beyond walking distance to their schools (Ceres Unified School District 2014b).

Several city parks lie approximately 1.5–2 miles northeast of Cowan Tract in southwest Ceres. Of these, Sam Ryno Park, at about 1.5 miles, is the closest but has no developed amenities; nearby developed park and recreational facilities include Strawberry Fields Park, Don Pedro Park, and Central Valley High School. Strawberry Fields Park is a neighborhood park featuring picnic facilities and play equipment, and Don Pedro Park features picnic facilities, play equipment, and an adult fitness area (City of Ceres 2010). The City of Ceres considers school facilities to be joint-use recreational facilities (City of Ceres 1997). Developed recreational amenities at Central Valley High School include baseball/softball fields, soccer fields, tennis courts, and a track.

The nearest grocery store to Cowan Tract is Joe's Food Mart, a small convenience market, approximately 0.25 mile north of Cowan Tract at the corner of Crows Landing Road and West Grayson Road. The nearest full-service supermarkets are Magic Market, 2.7 miles northeast of Cowan Tract at 3900 Morgan Road in Ceres, and La Perla Tapatia, 2.9 miles north of Cowan Tract at 2031 Crows Landing Road in Modesto.

## 2.1.8 Air Quality and Chronic Health Conditions

Stanislaus County is within the northern part of the eight-county San Joaquin Valley Air Pollution Control District (SJVAPCD), a regional public health agency responsible for air quality management in those eight counties. SJVAPCD cites several factors that contribute to the valley's air quality challenges, including high rates of chronic poverty and unemployment coupled with a high population growth rate, the presence of major transportation corridors, and topographic features such as the surrounding mountains combined with the area's meteorological conditions (San

Joaquin Valley Air Pollution Control District 2014a). SJVAPCD notes that two pollutants—ozone and particulate matter (PM) of both 10 microns or less (PM10) and 2.5 microns or less (PM2.5)— are of special concern, causing or exacerbating a variety of health conditions (San Joaquin Valley Air Pollution Control District 2014a). The presence of PM2.5, primarily a winter condition, triggers heart attacks, asthma, bronchitis, and respiratory infections, and has a strong correlation with hospital admissions and deaths (San Joaquin Valley Air Pollution Control District 2014a).

GHGs are not a criteria air pollutant and do not directly affect human health. GHG emissions are largely the result of combustion, decay and digestive processes, and emissions of industrial gases with high climate change potential. Unlike criteria pollutants such as carbon monoxide, PM10, PM2.5, and ozone, GHGs do not collect within a specific area or air basin. Their harm is done at a global level through the effect of increased concentrations of GHGs in Earth’s atmosphere.

Worldwide concern over GHG emissions is based on the climate change that they are causing by altering the way in which Earth’s atmosphere traps solar radiation as heat. The adverse effects of global climate change include rising sea levels, changes in habitat conditions for plants and animals, increased potential for wildfires, more severe weather extremes, and a reduction in California’s winter snow pack, among others. Through the impetus of Assembly Bill (AB) 32 (California Global Warming Solutions Act of 2006) and SB 375 (Sustainable Communities and Climate Protection Act of 2008), California has undertaken a statewide program of reducing GHG emissions to 1990 levels by 2020 in order to slow the rate of global climate change.

Climate change can have an indirect effect on human health in Stanislaus County to the extent that it results in warmer summer temperatures that facilitate ozone formation and exacerbate heat-related stress among outdoor workers, the elderly, small children, and the infirm. The amount of GHGs emitted within the Cowan Tract DUC is not atypical for a small, rural community.

SJVAPCD operates 36 air monitoring sites within its eight-county air basin. Of these, two air quality stations, one in Modesto and another in Turlock, monitor air quality within Stanislaus County. The Modesto monitoring site is the closest to Cowan Tract, approximately 5.5 miles north of the community. Table 2-2 shows the San Joaquin Valley air basin’s (SJVAB’s) current air quality attainment status for state and federal criteria pollutants (San Joaquin Valley Air Pollution Control District 2012).

**Table 2-2. San Joaquin Valley Air Basin Air Quality Attainment Status**

| Pollutant                     | Designation/Classification         |                         |
|-------------------------------|------------------------------------|-------------------------|
|                               | Federal Standards                  | State Standards         |
| Ozone—1-hour                  | No Federal Standard <sup>a</sup>   | Nonattainment/Severe    |
| Ozone—8-hour                  | Nonattainment/Extreme <sup>b</sup> | Nonattainment           |
| PM 10                         | Attainment <sup>c</sup>            | Nonattainment           |
| PM 2.5                        | Nonattainment <sup>d</sup>         | Nonattainment           |
| Carbon monoxide               | Attainment/Unclassified            | Attainment/Unclassified |
| Nitrogen dioxide              | Attainment/Unclassified            | Attainment              |
| Sulfur dioxide                | Attainment/Unclassified            | Attainment              |
| Lead (particulate)            | No Designation/Classification      | Attainment              |
| Hydrogen sulfide              | No Federal Standard                | Unclassified            |
| Sulfates                      | No Federal Standard                | Attainment              |
| Visibility reducing particles | No Federal Standard                | Unclassified            |
| Vinyl chloride                | No Federal Standard                | Attainment              |

Source: San Joaquin Valley Air Pollution Control District 2012.

- <sup>a</sup> Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the San Joaquin Valley air basin (SJVAB) as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.
- <sup>b</sup> Though the SJVAB was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).
- <sup>c</sup> On September 25, 2008, EPA redesignated the SJVAB to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.
- <sup>d</sup> The SJVAB is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the SJVAB as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).

Over the past decade, ozone levels have been trending downward within the SJVAB and, in 2013, for the first time on record, the air basin overall had zero violations of the federal hourly ozone standard, compared to 281 violations in 1996 (San Joaquin Valley Air Pollution Control District 2014b). At the same time, PM2.5 and PM10 levels have fluctuated with no clear upward or downward trend (California Air Resources Board 2015). Table 2-3 presents the number of days in which Stanislaus County ozone, PM2.5, and PM10 levels exceeded state and federal air quality standards in 2013 (California Air Resources Board 2015).



**Table 2-3. Stanislaus County Days in Exceedance of State and Federal Air Quality Standards, 2013**

| Monitoring Site        | Ozone                        |                                     |                              | PM 2.5                             | PM 10                           |
|------------------------|------------------------------|-------------------------------------|------------------------------|------------------------------------|---------------------------------|
|                        | # Days > State 1-Hr Standard | # Days > National '08 8-Hr Standard | # Days > State 8-Hr Standard | Est Days > National 24-Hr Standard | Est Days > State 24-Hr Standard |
| Modesto 14th St.       | 0                            | 2                                   | 13                           | 37.6                               | 57.7                            |
| Turlock S. Minaret St. | 1                            | 14                                  | 24                           | 40.3                               | 73.7                            |

Source: California Air Resources Board 2015.

The 2013 *Community Health Assessment of Stanislaus County* (CHA), prepared by the Stanislaus County Health Services Agency, presents data about the health and well-being of Stanislaus County residents, including information on the burden of five major chronic diseases—hypertension, heart disease, stroke, diabetes, and asthma—and the environmental and behavioral factors that influence their prevalence. Primary environmental factors identified in the CHA as contributing to these chronic health conditions are air quality and retail food environment; behavioral factors include diet, fast food consumption, fruit and vegetable consumption, quality of clinical care, physical activity, obesity, and tobacco use (Stanislaus County Health Services Agency 2013). As measured in 2007, Stanislaus County has the second worst retail food environment in California, with 5.48 fast-food purveyors and convenience stores for every grocery store or produce vendor near residences, compared to 4.48 statewide, and a high rate of fast food consumption in the low income population (Stanislaus County Health Services Agency 2013). The county also has the highest prevalence of obesity in the state (31.5% compared to 21.2% statewide), particularly among males, and a higher percentage of smokers than the California average (Stanislaus County Health Services Agency 2013).

The CHA presents countywide data and also divides Stanislaus County into nine geographic regions, shown in Table 2-4 below. Cowan Tract falls within the central region identified in Table 2-4.

**Table 2-4. Community Health Assessment of Stanislaus County Geographic Regions**

| Region            | Communities  |
|-------------------|--|
| Central           | Modesto (parts) and outlying areas, including Cowan Tract, with ZIP codes 95350, 95355, 95357, and 95358           |
| East Central      | Airport Neighborhood and East Modesto (parts) with ZIP code 95354  |
| Southeast Side    | Denair, Empire, Hughson, Hickman, La Grange, Waterford with ZIP codes 95316, 95319, 95326, 95323, 95329, and 95386 |
| Northeast Side    | Knights Ferry, Valley Home, Oakdale, Riverbank with ZIP codes 95230, 95361, and 95367                              |
| North Side        | Del Rio, Salida and Modesto (parts) with ZIP codes 95356 and 95368   |
| Southwest Central | West Modesto and South Modesto with ZIP code 95351   |
| West Side         | Crows Landing, Grayson, Newman, Patterson with ZIP codes 95313, 95360, 95363, 95385, and 95387                     |
| South Central     | Ceres, Keyes with ZIP codes 95307 and 95328  |
| South Side        | Turlock with ZIP codes 95380 and 95382   |

Source: Stanislaus County Health Services Agency 2013:Table 2.

Chronic health conditions of concern within Stanislaus County include hypertension, heart disease, stroke, diabetes and asthma. According to the CHA, the percentage of Stanislaus adults diagnosed with high blood pressure increased 31.2% between 2001 and 2009, and surpassed the percentage of California adults diagnosed with high blood pressure use. As of 2009, approximately 30.7% of Stanislaus County adults were diagnosed with hypertension, compared to 26.2% statewide. Among Stanislaus County's nine regions, the central region, including Cowan Tract, ranks fifth for hypertension-related emergency room visits, fourth highest for hypertension-related hospitalizations, and fifth for hypertension-related mortality (Stanislaus County Health Services Agency 2013).

The CHA notes that in 2009, 5% of Stanislaus County adults had been diagnosed with heart disease, compared to 5.9% statewide and 12% of adults nationwide. The central region of Stanislaus County, including Cowan Tract, ranks third-lowest for heart disease-related emergency room visits among the county's nine regions, has the fourth-lowest rate of heart disease-related hospitalizations, and has the third-highest rate of heart disease-related mortality (Stanislaus County Health Services Agency 2013).

The CHA indicates that the California Health Interview Survey, on which it relies for some data, has not consistently tracked either the overall prevalence of cancer or the rates of individual types of cancer; data for cancer rates is therefore less current than for other more closely tracked conditions. Although the percentage of Stanislaus County adults diagnosed with cancer has increased from 7.4% in 2001 to 8.5% in 2005, it remains lower than the statewide rate. However, at a rate of approximately 21.4% of all deaths annually, cancer is the second most common cause of death in Stanislaus County. The central region of Stanislaus County, including Cowan Tract, ranks fourth-lowest among the nine regions for cancer-related emergency room visits, fifth for cancer-related hospitalizations, and has the fourth-highest rate of cancer-related mortality (Stanislaus County Health Services Agency 2013).

Diabetes, according to the CHA, affects 8.3% of the United States population and is the seventh leading cause of death nationwide. Within California, from 2001 to 2007, the percentage of people diagnosed with diabetes increased from 6.2% to 8.5%, a 37% increase. Trends in Stanislaus County are consistent with the statewide increase; in 2009, 7.6% of adults in Stanislaus County had been diagnosed with diabetes. While the prevalence of diabetes was lower in Stanislaus County than California, in 2011, Stanislaus County had higher hospitalization rates than California for four primary indicators of diabetes management, including hospitalization for short-term complications, long-term complications, lower-extremity amputation, and uncontrolled diabetes (Stanislaus County Health Services Agency 2013). Among Stanislaus County's nine regions, the central region, including Cowan Tract, ranks fifth for diabetes-related emergency room visits and hospitalizations, and fourth-highest for diabetes-related mortality (Stanislaus County Health Services Agency 2013).

According to the CHA, in 2009 the percentage of Stanislaus County adults diagnosed with asthma was 21.8%, compared to 13.5% of the adult population statewide. Among Stanislaus County's nine regions, the central region, including Cowan Tract, has the third-highest rate of asthma-related emergency room visits and ranks fifth for asthma-related hospitalizations (Stanislaus County Health Services Agency 2013). Due to the low asthma-related death rate, the CHA does not track or rank asthma-related mortality.

The CHA also uses life expectancy at birth (LEB) as a measure of quality of life within Stanislaus County and each of its nine regions. LEB is defined as the number of years a newborn infant is

projected to live if mortality patterns at the time of its birth were to remain the same throughout its life. The LEB for Stanislaus County is calculated to be 77.2 years, 1.7 year less than the nationwide LEB of 78.9. The LEBs within the nine Stanislaus County regions range from a high of 80.27 years to a low of 75.01 years; the central region, which includes Cowan Tract, ranks second-shortest among these, with a LEB of 77.73 years (Stanislaus County Health Services Agency 2013).

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## 2.2 Crows Landing

### 2.2.1 General Characteristics and Demographics

Crows Landing is an unincorporated community located in southwest Stanislaus County 6 miles southeast of the city of Patterson and 13 miles southwest of the city of Turlock. The community of Crows Landing is within the approximately 2,030-acre Crows Landing CDP and had a 2010 census population of 355 people in 121 households. The median annual household income in California was \$60,190 in 2013; it was \$29,141 in Crows Landing (United States Census Bureau 2013a, 2013b). With 41% of its housing units in need of rehabilitation, Crows Landing ranks sixth among unincorporated communities in the county for percentage of housing units in need of rehabilitation (Stanislaus County 2012). At approximately 2,030 acres, the Crows Landing CDP occupies a much larger area than the 86-acre area identified as the Crows Landing DUC and encompasses approximately 1,944 acres of agricultural lands surrounding the DUC, particularly to the north, west, and south.

The Crows Landing DUC is roughly bound by 4<sup>th</sup> Street on the northwest, E Street and Armstrong Road on the northeast, Fink Road on the south, and agricultural lands and Bonita Avenue on the west. SR 33 and the Union Pacific Railroad tracks bisect the community in a northwest-southeast direction. In addition to the residential uses, a range of commercial and public uses are present in Crows Landing. The community includes agricultural packing and shipping operations and a variety of commercial uses clustered along and near SR 33 and the Union Pacific Railroad tracks, as well as a fire station, an elementary school, and a United States Post Office. Crows Landing is surrounded by agricultural land and accompanying agriculture-related residences. Residential uses in Crows Landing consist of single-family residential units (Stanislaus County 2012). All of the land immediately surrounding the Crows Landing DUC is zoned General Agriculture, with a 40-acre minimum parcel size (A-2-40) (Stanislaus County 2014d). These agricultural lands are identified by the California Department of Conservation's Important Farmlands Inventory as prime farmland (California Department of Conservation 2014); much of this area, including land adjacent to the DUC, is also under Williamson Act contract (California Department of Conservation 2012). These agricultural lands neither support the requisite level of existing development for consideration under SB 244 nor are likely to develop; therefore, they are not included as part of the Crows Landing community studied for SB 244 purposes. The former Crows Landing airfield, proposed for development as the Crows Landing Business Industrial Park with a general aviation airport, is located approximately 1.5 miles to the west.

The General Plan's Housing Element identifies Crows Landing as a Residential Development Potential Study Area, noting that Crows Landing has the potential to accommodate three more single-family dwelling units (Stanislaus County 2012). Existing infrastructure and services for the Crows Landing DUC are described below.

### 2.2.2 Infrastructure, Utilities, and Services

Infrastructure, utilities, and services considered for the Crows Landing DUC are presented in Figure 2-2, *Crows Landing Disadvantaged Unincorporated Community*, and include transportation facilities and services including roads, sidewalks, street lighting, and bus stops/service; water, wastewater, and storm drainage systems; solid waste disposal; public safety services such as law enforcement and fire protection; and access to community amenities and services such as schools,

parks, and grocery stores. Data associated with chronic health conditions and air quality are described at a regional level because they are not available for the Crows Landing DUC specifically.

## 2.2.3 Transportation Facilities and Services

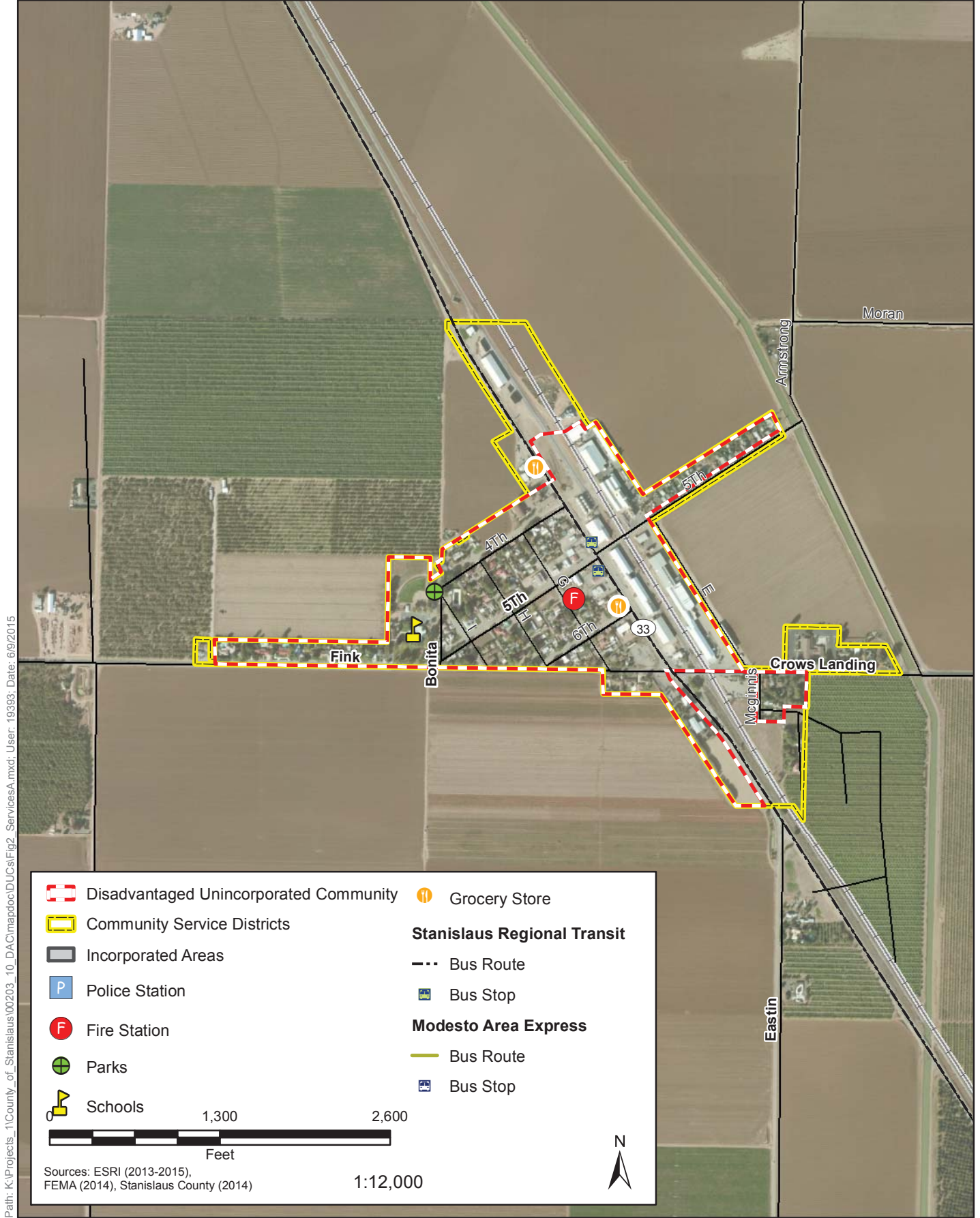
Transportation infrastructure in Crows Landing consists of public highways and roads, railroad tracks, and StaRT bus service. Major north-south highways serving western Stanislaus County include Interstate 5 (I-5) and SR 33. Crows Landing lies approximately 3 miles east of I-5 and is bisected by SR 33 and the Union Pacific Railroad tracks. SR 33 is a two-lane undivided highway through Crows Landing, with a four-way stop at its intersection with Fink Road; the County General Plan classifies SR 33 as a four-lane expressway, a category of road intended to move high volumes of people and goods between urban areas within the county at higher speeds (Stanislaus County 2006). (Stanislaus Council of Governments 2014). Fink Road is also currently characterized as a two-lane major road and classified by the County General Plan as a four-lane expressway (Stanislaus Council of Governments 2014; Stanislaus County 2006). With the exception of SR 33 and Fink Road, all remaining roads within Crows Landing are presently two-lane local roads and are expected to remain as such (Stanislaus Council of Governments 2014; Stanislaus County 2006). Other than a short segment of sidewalk on the west side of SR 33 between 4<sup>th</sup> and 6<sup>th</sup> Streets, no sidewalks, curbs, or gutters are present on the roadways in and around Crows Landing (Stanislaus County 2012). Street lights are present along SR 33 and parts of 5<sup>th</sup> Street and Fink Road. The Union Pacific railroad tracks extend north-south immediately east of Crows Landing.

Fixed-route bus service on StaRT Route 45 West connects Crows Landing to Gustine, Newman, and Patterson (Stanislaus Regional Transit 2014a). Buses run on Route 45 West Monday–Friday from 5:30 a.m. to 9:26 p.m., providing eight round trips, and on Saturdays from 5:45 a.m. to 8:39 p.m., providing six round trips (Stanislaus Regional Transit 2014a). From the Patterson Transfer Location at Veteran’s Memorial Park, passengers can transfer to buses on Route 45 East, which travels between Patterson and Turlock, or to Route 40, which connects to Westley, Grayson, and Modesto (Stanislaus Regional Transit 2014b). From Modesto’s Downtown Transportation Center, riders can transfer and connect to the Modesto Amtrak station, the ACE train station in Lathrop, and the Dublin BART station (Stanislaus Regional Transit 2014b; City of Modesto 2009).

Crows Landing has two StaRT bus stops, one northbound and one southbound, on SR 33 near 5<sup>th</sup> Street (Stanislaus Regional Transit 2014a). In addition, Crows Landing falls within the Newman Dial-a-Ride service area, which comprises the cities of Newman and Patterson in addition to the communities of Crows Landing and Gustine (Stanislaus Regional Transit 2014b). Newman Dial-a-Ride provides bus service three times per day, Monday–Saturday (Stanislaus Regional Transit 2014b).

## 2.2.4 Water, Wastewater, and Stormwater Drainage Systems

Crows Landing receives all of its domestic water for residential and commercial use from ground water supplied by the Crows Landing CSD. The Crows Landing CSD obtains water through its two groundwater wells (Stanislaus Local Agency Formation Commission 2014). The Crows Landing CSD water supply system is operating at capacity and has a history of water supply problems, caused in large part by the age of its infrastructure (Stanislaus Local Agency Formation Commission 2014). Most of the Crows Landing CSD’s water supply flows through an aging system of small pipelines that lose pressure under heavy consumptive demands (Stanislaus Local Agency Formation Commission



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|  |                                    |
|--|------------------------------------|
| Disadvantaged Unincorporated Community | Grocery Store                      |
| Community Service Districts            | <b>Stanislaus Regional Transit</b> |
| Incorporated Areas                     | Bus Route                          |
| Police Station                         | Bus Stop                           |
| Fire Station                           | <b>Modesto Area Express</b>        |
| Parks                                  | Bus Route                          |
| Schools                                | Bus Stop                           |

Sources: ESRI (2013-2015), FEMA (2014), Stanislaus County (2014) 1:12,000



**Figure 2-2**  
**Crows Landing Disadvantaged Unincorporated Community**



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2014). The Crows Landing CSD recently received a \$20,000 grant from the Stanislaus County Community Development Fund toward the repair of one of its wells that was found to have several large holes (Stanislaus County Local Agency Formation Commission 2014).

Wastewater in Crows Landing is processed through individual private septic systems, and no storm drainage system is present in the community (Stanislaus Local Agency Formation Commission 2014). Drainage consists primarily of roadside percolation, with no pipelines or detention ponds (Stanislaus County 2004).

## 2.2.5 Solid Waste Disposal

Stanislaus County contracts with four franchised solid waste collection companies, Bertolotti Disposal, Gilton Solid Waste, Modesto Disposal/Waste Management, and Turlock Scavenger, for residential and commercial garbage collection service in the unincorporated area (Stanislaus County 2014a). Crows Landing falls within County-designated Franchise Area 1, served by Bertolotti Disposal (Stanislaus County 2014b). Besides providing solid waste and recyclables collection services to Franchise Area 1, Bertolotti Disposal operates a transfer station, open to the public Mondays through Saturdays, on Flamingo Road in Ceres. Additionally, Stanislaus County's Fink Road Sanitary Landfill, a Class III landfill for nonhazardous municipal solid waste, is operated by the County's Department of Environmental Resources and is open Monday–Saturday to private citizens, school districts, businesses, and local agencies for individual disposal of solid waste (Stanislaus County 2014c).

## 2.2.6 Law Enforcement and Fire Protection

Law enforcement services for Crows Landing, as for the rest of unincorporated Stanislaus County and four contract cities, are provided by the Stanislaus County Sheriff's Department. The nearest sheriff's station to Crows Landing is the main station, approximately 16 miles northeast at 250 East Hackett Road in Ceres. In addition, the Patterson police station, located approximately 6.5 miles northwest of Crows Landing in the city of Patterson, is staffed by the Stanislaus County Sheriff's Department, which provides contract police services to Patterson under the title of Patterson Police Services (Stanislaus County Sheriff's Department 2014). The Newman police station is 6 miles southeast of Crows Landing. Although the Sheriff's Department remains the designated law enforcement agency for unincorporated areas of the county, in practice, the County Sheriff's Department and Newman Police Department provide each another with frequent mutual aid and back-up services (Stanislaus County Sheriff's Department 2014).

The operations division of the Sheriff's Department provides law enforcement services to over 200,000 people in a 1,521-square-mile area (Stanislaus County Sheriff's Department 2014). Two units—patrol and investigations—comprise the Sheriff's Department operations division. The patrol unit responds to calls for assistance, investigates crime, makes arrests, and performs preventive patrol services (Stanislaus County Sheriff's Department 2014). The investigations unit follows up reports of major crimes, collects and prepares evidence for trials, apprehends offenders, and recovers stolen property (Stanislaus County Sheriff's Department 2014).

The crime rates presented below were compiled by AGS using the primary reporting categories from the FBI 2005 – 2010 Uniform Crime Report databases along with preliminary 2011 release data and census data related to socioeconomic characteristics. The crimes are divided into two main categories, personal crimes (murder, rape, robbery, and assault) and property crimes (burglary,

larceny, and motor vehicle theft). These crime rates are based on a comparison of the average local crime rate to the national average for the same crime, with a crime index of 100 considered average; scores above 100 are therefore considered greater, or worse, than average. For example, a score of 130 would represent a crime rate 30% greater than the national average for that type of crime. These crime rates are unweighted (i.e., a murder and a theft carry the same weight for calculation purposes), and are tracked at the census block group level and above, which may not correspond precisely to the DUC boundaries. Census blocks are the smallest geographic area for which the United States Census Bureau collects and tabulates data; a set of these constitutes a census block group. Census blocks vary widely in geographic size, and are generally smaller in urban areas and progressively larger in suburban, rural, or remote areas; a given block group is larger in area and population than the individual census blocks of which it is made, and generally contains between 600 and 3,000 people (United States Census Bureau 1994). Crows Landing DUC falls within two census block groups; the primarily residential area north of Fink Road and west of SR 33 falls within block group 060990034.001 and the area southeast of Fink Road/SR 33 falls within block group 060990034.002.

The overall personal crime indices for the two census block groups comprising Crows Landing are 118 and 83, and the property crime indices are 55 and 82. These rates mean that personal crimes occur at rates 18% higher than the national average in the main area of Crows Landing, north of Fink Road, and 83% of the national average for the small area of Crows Landing southeast of Fink Road and SR 33. Property crimes occur at a rate of 55% and 82% of the national average for these two block groups. The general and individual crime indices for these categories are shown in Table 2-5 below.

**Table 2-5. Crows Landing Crime Indices**

|                      | Personal Crime |               |                      | Property Crime |               |
|----------------------|----------------|---------------|----------------------|----------------|---------------|
| Block Group          | 060990034.001  | 060990034.002 | Block Group          | 060990034.001  | 060990034.002 |
| Personal Crime Index | 118            | 83            | Property Crime Index | 55             | 82            |
| Murder               | 160            | 208           | Burglary             | 86             | 163           |
| Rape                 | 136            | 49            | Larceny              | 63             | 88            |
| Robbery              | 80             | 44            | Motor Vehicle Theft  | 41             | 12            |
| Assault              | 85             | 32            |                      |                |               |

Source: Applied Geographic Solutions and Atlas Publishing 2012.

The West Stanislaus County FPD provides fire protection, emergency, and rescue services to the Crows Landing area, as well as to Grayson, Diablo Grande, and Westley (Emergency Services Consulting 2007). District-wide, 5 full-time firefighters per shift and 100 volunteers staff the West Stanislaus County FPD (Emergency Services Consulting 2007). The West Stanislaus County FPD’s Fire Station No. 6 is located within Crows Landing at 22012 G Street and houses two engines (West Stanislaus County Fire Protection District 2014).

A fire department’s ability to meet the fire protection needs of its service area is typically evaluated by the Insurance Services Office (ISO), a private organization that assesses risks, including fire protection, for insurance purposes. The ISO considers a variety of factors, including a district’s fire-fighting apparatus, staffing, training, location, and water supply, to rate fire departments on a scale

from 1 (best fire protection possible) to 10 (no fire protection). The ISO rating therefore reflects a fire department's ability to protect the residents and businesses within its service area from fire. The West Stanislaus County FPD carries an ISO rating of 4 (West Stanislaus Fire Protection District 2015).

## 2.2.7 Schools and Community Amenities

Crows Landing is within the Newman-Crows Landing Unified School District, which in 9 schools serves 2,887 students in grades K–12 (California Department of Education 2014b; Stanislaus County Office of Education 2009). One school, Bonita Elementary School, is located in Crows Landing. Bonita Elementary School serves 156 students in grades K–5 (California Department of Education 2014a). The nearest middle school to Crows Landing is Yolo Middle School, 7 miles south in the city of Newman. Yolo Middle School serves 646 students in grades 6–8 (California Department of Education 2014d). The closest high school is also in Newman, Orestimba High School, serving 768 students in grades 9–12, is 6 miles south of Crows Landing (California Department of Education 2014c).

Crows Landing has one public park, the 1-acre Bonita Park and Pool facility, located near the northwestern edge of the community across the street from Bonita Elementary School. Bonita Park features picnic tables, a swimming pool, and an informal play area; however, the Bonita Park swimming pool is closed and unavailable for public use pending future repairs (Stanislaus County n.d.). In addition, Bonita Elementary School includes a playground, outdoor basketball courts, and a baseball/softball field.

Two small convenience markets are located in Crows Landing. Las Palmas Market & Deli is located at the north end of Crows Landing on SR 33 and the Qwik-Serve Market #2 is also on SR 33 at 6<sup>th</sup> Street. The nearest full-service supermarkets are Save Mart, approximately 6 miles northwest in Patterson, and Nob Hill Foods, about 6.5 miles south in Newman.

## 2.2.8 Air Quality and Chronic Health Conditions

Stanislaus County is within the northern part of the eight-county SJVAPCD, the regional public health agency responsible for air quality management in those eight counties. SJVAPCD cites several factors that contribute to the valley's air quality challenges, including high rates of chronic poverty and unemployment coupled with a high population growth rate, the presence of major transportation corridors, and topographic features such as the surrounding mountains combined with the area's meteorological conditions (San Joaquin Valley Air Pollution Control District 2014a). SJVAPCD notes that ozone, PM10, and PM2.5, are of special concern, causing or exacerbating a variety of health conditions (San Joaquin Valley Air Pollution Control District 2014a). The presence of PM2.5, primarily a winter condition, triggers heart attacks, asthma, bronchitis, and respiratory infections, and has a strong correlation with hospital admissions and deaths (San Joaquin Valley Air Pollution Control District 2014a).

GHGs are not a criteria air pollutant and do not directly affect human health. GHG emissions are largely the result of combustion, decay and digestive processes, and emissions of industrial gases with high climate change potential. Unlike criteria pollutants such as carbon monoxide, PM10, PM2.5, and ozone, GHGs do not collect within a specific area or air basin. Their harm is done at a global level through the effect of increased concentrations of GHGs in Earth's atmosphere.

Worldwide concern over GHG emissions is based on the climate change that they are causing by altering the way in which Earth’s atmosphere traps solar radiation as heat. The adverse effects of global climate change include rising sea levels, changes in habitat conditions for plants and animals, increased potential for wildfires, more severe weather extremes, and a reduction in California’s winter snow pack, among others. Through the impetus of AB 32 (California Global Warming Solutions Act of 2006) and other legislation, California has undertaken a statewide program of reducing GHG emissions to 1990 levels by 2020 in order to slow the rate of global climate change.

Climate change can have an indirect effect on human health in Stanislaus County to the extent that it results in warmer summer temperatures that facilitate ozone formation and exacerbate heat-related stress among outdoor workers, the elderly, small children, and the infirm. The amount of GHGs emitted within the Crows Landing DUC is not atypical for a small, rural community.

SJVAPCD operates 36 air monitoring sites within its eight-county air basin. Of these, two air quality stations, one in Modesto and another in Turlock, monitor air quality within Stanislaus County. The Turlock monitoring site is the closest to Crows Landing, approximately 14.3 miles northeast of the community. Table 2-6 shows the SJVAB’s current air quality attainment status for state and federal criteria pollutants (San Joaquin Valley Air Pollution Control District 2012).

**Table 2-6. San Joaquin Valley Air Basin Air Quality Attainment Status**

| Pollutant                     | Designation/Classification         |                         |
|-------------------------------|------------------------------------|-------------------------|
|                               | Federal Standards                  | State Standards         |
| Ozone—1-hour                  | No Federal Standard <sup>a</sup>   | Nonattainment/Severe    |
| Ozone—8-hour                  | Nonattainment/Extreme <sup>b</sup> | Nonattainment           |
| PM 10                         | Attainment <sup>c</sup>            | Nonattainment           |
| PM 2.5                        | Nonattainment <sup>d</sup>         | Nonattainment           |
| Carbon monoxide               | Attainment/Unclassified            | Attainment/Unclassified |
| Nitrogen dioxide              | Attainment/Unclassified            | Attainment              |
| Sulfur dioxide                | Attainment/Unclassified            | Attainment              |
| Lead (particulate)            | No Designation/Classification      | Attainment              |
| Hydrogen sulfide              | No Federal Standard                | Unclassified            |
| Sulfates                      | No Federal Standard                | Attainment              |
| Visibility reducing particles | No Federal Standard                | Unclassified            |
| Vinyl chloride                | No Federal Standard                | Attainment              |

Source: San Joaquin Valley Air Pollution Control District 2012.

- <sup>a</sup> Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the San Joaquin Valley air basin (SJVAB) as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.
- <sup>b</sup> Though the SJVAB was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved SJVAB reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).
- <sup>c</sup> On September 25, 2008, EPA redesignated the SJVAB to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.
- <sup>d</sup> The SJVAB is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the SJVAB as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).

Over the past decade, ozone levels have been trending downward within the SJVAB and, in 2013, for the first time on record, the air basin overall had zero violations of the federal hourly ozone standard, compared to 281 violations in 1996 (San Joaquin Valley Air Pollution Control District 2014b). At the same time, PM2.5 and PM10 levels have fluctuated with no clear upward or downward trend (California Air Resources Board 2015). Table 2-7 presents the number of days in which Stanislaus County ozone, PM2.5, and PM10 levels exceeded state and federal air quality standards in 2013 (California Air Resources Board 2015).

**Table 2-7. Stanislaus County Days in Exceedance of State and Federal Air Quality Standards, 2013**

| Monitoring Site        | Ozone                        |                                     |                              | PM 2.5                             | PM 10                           |
|------------------------|------------------------------|-------------------------------------|------------------------------|------------------------------------|---------------------------------|
|                        | # Days > State 1-Hr Standard | # Days > National '08 8-Hr Standard | # Days > State 8-Hr Standard | Est Days > National 24-Hr Standard | Est Days > State 24-Hr Standard |
| Modesto 14th St.       | 0                            | 2                                   | 13                           | 37.6                               | 57.7                            |
| Turlock S. Minaret St. | 1                            | 14                                  | 24                           | 40.3                               | 73.7                            |

Source: California Air Resources Board 2015.

The 2013 CHA, prepared by the Stanislaus County Health Services Agency, presents data about the health and well-being of Stanislaus County residents, including information on the burden of five major chronic diseases—hypertension, heart disease, stroke, diabetes and asthma—and the environmental and behavioral factors that influence their prevalence. Primary environmental factors identified in the CHA as contributing to these chronic health conditions are air quality and retail food environment; behavioral factors include diet, fast food consumption, fruit and vegetable consumption, quality of clinical care, physical activity, obesity, and tobacco use (Stanislaus County Health Services Agency 2013). As measured in 2007, Stanislaus County has the second worst retail food environment in California, with 5.48 fast-food purveyors and convenience stores for every grocery store or produce vendor near residences, compared to 4.48 statewide, and a high rate of fast food consumption in the low income population (Stanislaus County Health Services Agency 2013). The county also has the highest prevalence of obesity in the state (31.5% compared to 21.2% statewide), particularly among males, and a higher percentage of smokers than the California average (Stanislaus County Health Services Agency 2013).

The CHA presents countywide data and also divides Stanislaus County into nine geographic regions, shown in Table 2-8 below. Crows Landing falls within the west side region identified in Table 2-8.

**Table 2-8. Community Health Assessment of Stanislaus County Geographic Regions**

| Region            | Communities  |
|-------------------|--|
| Central           | Modesto (parts) and outlying areas with ZIP codes 95350, 95355, 95357, and 95358                                   |
| East Central      | Airport Neighborhood and East Modesto (parts) with ZIP code 95354  |
| Southeast Side    | Denair, Empire, Hughson, Hickman, La Grange, Waterford with ZIP codes 95316, 95319, 95326, 95323, 95329, and 95386 |
| Northeast Side    | Knights Ferry, Valley Home, Oakdale, Riverbank with ZIP codes 95230, 95361, and 95367                              |
| North Side        | Del Rio, Salida and Modesto (parts) with ZIP codes 95356 and 95368   |
| Southwest Central | West Modesto and South Modesto with ZIP code 95351   |
| West Side         | Crows Landing, Grayson, Newman, Patterson with ZIP codes 95313, 95360, 95363, 95385, and 95387                     |
| South Central     | Ceres, Keyes with ZIP codes 95307 and 95328  |
| South Side        | Turlock with ZIP codes 95380 and 95382   |

Source: Stanislaus County Health Services Agency 2013:Table 2.



Chronic health conditions of concern within Stanislaus County include hypertension, heart disease, stroke, diabetes and asthma. According to the CHA, the percentage of Stanislaus adults diagnosed with high blood pressure increased 31.2% between 2001 and 2009, and surpassed the percentage of California adults diagnosed with high blood pressure use. As of 2009, approximately 30.7% of Stanislaus County adults were diagnosed with hypertension, compared to 26.2% statewide. Among Stanislaus County's nine regions, the west side, including Crows Landing, has the lowest rate of hypertension-related emergency room visits, ranks fifth for hypertension-related hospitalizations, and has the second-lowest hypertension-related mortality rate (Stanislaus County Health Services Agency 2013).

The CHA notes that in 2009, 5% of Stanislaus County adults had been diagnosed with heart disease, compared to 5.9% statewide and 12% of adults nationwide. Stanislaus County's west side has the second-lowest rate of heart disease-related emergency room visits among the county's nine regions, the lowest rate of heart disease-related hospitalizations, and the fourth-highest mortality rate (Stanislaus County Health Services Agency 2013).

The CHA indicates that the California Health Interview Survey, on which it relies for some data, has not consistently tracked either the overall prevalence of cancer or the rates of individual types of cancer; data for cancer rates is therefore less current than for other, more closely tracked, conditions. Although the percentage of Stanislaus County adults diagnosed with cancer has increased from 7.4% in 2001 to 8.5% in 2005, it remains lower than the statewide rate. However, at a rate of approximately 21.4% of all deaths annually, cancer is the second most common cause of death in Stanislaus County. The west side of Stanislaus County ranks seventh (third-lowest) among the nine regions for cancer-related emergency room visits, has the lowest rate of cancer-related hospitalizations, and the highest rate of cancer-related mortality (Stanislaus County Health Services Agency 2013).

Diabetes, according to the CHA, affects 8.3% of the United States population and is the seventh leading cause of death nationwide. Within California, from 2001 to 2007, the percentage of people diagnosed with diabetes increased from 6.2% to 8.5%, a 37% increase. Trends in Stanislaus County are consistent with the statewide increase; in 2009, 7.6% of adults in Stanislaus County had been diagnosed with diabetes. While the prevalence of diabetes was lower in Stanislaus County than California, in 2011, Stanislaus County had higher hospitalization rates than California for four primary indicators of diabetes management, including hospitalization for short-term complications, long-term complications, lower-extremity amputation, and uncontrolled diabetes (Stanislaus County Health Services Agency 2013). Among Stanislaus County's nine regions, the west side has the lowest rate of diabetes-related emergency room visits, the third-lowest rate of hospitalizations, and the highest rate of diabetes-related mortality (Stanislaus County Health Services Agency 2013).

According to the CHA, in 2009 the percentage of Stanislaus County adults diagnosed with asthma was 21.8%, compared to 13.5% of the adult population statewide. The west side region has Stanislaus County's second-lowest rate of asthma-related emergency room visits and hospitalizations among the county's nine regions (Stanislaus County Health Services Agency 2013). Due to the low asthma-related death rate, the CHA does not track or rank asthma-related mortality.

The CHA also uses LEB as a measure of quality of life within Stanislaus County and each of its nine regions. LEB is defined as the number of years a newborn infant is projected to live if mortality patterns at the time of its birth were to remain the same throughout its life. The LEB for Stanislaus County is calculated to be 77.2 years, 1.7 years less than the nationwide LEB of 78.9. The LEBs



within the nine Stanislaus County regions range from a high of 80.27 years to a low of 75.01 years; the west side region ranks third-highest among these, with a LEB of 79.58 years (Stanislaus County Health Services Agency 2013).

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## 2.3 Grayson

### 2.3.1 General Characteristics and Demographics

Grayson is an unincorporated residential community comprised primarily of single-family residential units located approximately 11 miles southwest of the city of Modesto and 6.5 miles northwest of the city of Patterson. In 2010, Grayson had 280 housing units, 250 of which were occupied (United States Census Bureau 2013a). The community of Grayson is a CDP with a population of approximately 952 people in 250 households. California's median annual income was \$60,190 in 2013; Grayson's median annual household income was \$37,899 (United States Census Bureau 2013a, 2013b). At 1,632 acres, the Grayson CDP occupies a much larger area than the roughly 100-acre area identified as the Grayson DUC, and encompasses approximately 1,532 acres of agricultural lands north of the DUC. The majority of land within the Grayson CDP is categorized by the California Department of Conservation's Important Farmlands Inventory as either prime farmland or nonagricultural and natural vegetation; the remaining small areas consist of grazing land and farmland of local importance (California Department of Conservation 2014); most of this area is not enrolled in the Williamson Act program (California Department of Conservation 2012). Part of the Grayson CDP north of the DUC is zoned Planned Development (PD), however, the PD is expired and use of the area is limited to agricultural use that does not support the requisite level of existing development for consideration under SB 244; therefore, it is not included as part of the Grayson DUC.

The Grayson DUC is roughly bordered by Hito Drive on the north, the San Joaquin River on the east, Grayson Road on the south, and River Road on the west. The community is surrounded on the north, west, and south by agricultural land and scattered agriculture-related structures and residences, and bordered on the eastern side by the San Joaquin River. Adjacent land to the west, south, and east of the Grayson DUC is zoned General Agriculture, with a 40-acre minimum parcel size (A-2-40) (Stanislaus County 2014).

The General Plan's Housing Element identifies Grayson as a Residential Development Potential Study Area and that it has the potential to accommodate 10 more dwelling units (Stanislaus County 2012). Existing infrastructure and services for Grayson are described below.

### 2.3.2 Infrastructure, Utilities, and Services

Infrastructure, utilities, and services considered for the Grayson DUC are presented in Figure 2-3, *Grayson Disadvantaged Unincorporated Community*, and include transportation facilities and services including roads, sidewalks, street lighting, and bus stops/service; water, wastewater, and storm drainage systems; solid waste disposal; public safety services such as law enforcement and fire protection; and access to community amenities and services such as schools, parks, and grocery stores. Data associated with chronic health conditions and air quality are described at a regional level because they are not available specifically for the Grayson DUC.

### 2.3.3 Transportation Facilities and Services

Transportation infrastructure in the Grayson area consists of public highways and roads, and StaRT bus service. Major north-south highways serving western Stanislaus County include I-5 and SR 33. Grayson lies approximately 4.7 miles east of I-5 and 1.3 miles east of SR 33, the Union Pacific

Railroad tracks, and the community of Westley on West Grayson Road. West Grayson Road, which forms the DUC's southern border, is a two-lane major road; all of the roads within Grayson are two-lane local roads (Stanislaus County 2006; Stanislaus Council of Governments 2014). The County General Plan classifies West Grayson Road as a four-lane expressway, intended to move high volumes of people and goods between urban areas within the county (Stanislaus County 2006). Although all streets are paved and most have sidewalks, curbs, and gutters, approximately 40% of the housing units in Grayson lack sidewalks (Stanislaus County 2012).

Fixed-route bus service on StaRT Route 40 connects Grayson to Modesto, Westley, and Patterson (Stanislaus Regional Transit 2014a). StaRT Route 40 provides round trips between Modesto and Patterson; Monday–Friday, there are eight round trips, running approximately every 2 hours from 5:20 a.m. to 9:08 p.m.; on Saturdays, there are five round trips, running every 2 hours and 45 minutes from 8:15 a.m. to 8:12 p.m.; no StaRT buses run on Route 40 on Sundays (Stanislaus Regional Transit 2014b). From the Modesto Downtown Transit Center, passengers can transfer to buses on Route 10 Express to Turlock; Route 15 to Ceres, Keyes, and Turlock; and Route 60 to Riverbank and Oakdale, as well as to the Modesto Amtrak station, the ACE train station in Lathrop, and the Dublin BART station (City of Modesto 2009; Stanislaus Regional Transit 2014c). From the Patterson Transfer Location at Veteran's Memorial Park, passengers can transfer to buses on Route 45 East, which travels between Patterson and Turlock, and Route 45 West, which connects Patterson to Crows Landing, Newman, and Gustine (Stanislaus Regional Transit 2014c). Grayson has two StaRT bus stops, one at Amelia Street and Stakes Road, and another at Laird and Mary Streets (Stanislaus Regional Transit 2014c).

### 2.3.4 Water, Wastewater, and Stormwater Drainage Systems

The City of Modesto provides municipal water service to Grayson through the former Del Este water system; the water is pumped from two groundwater wells in the Grayson area, treated through an ion exchange nitrate treatment system, then stored in a 0.22 million gallon tank prior to distribution (Stanislaus County Local Agency Formation Commission 2014). This approach has reduced nitrate contamination levels such that Grayson's water supply had no recorded water quality violations in 2014 (City of Modesto 2010, 2014). However, the City of Modesto's *2010 Water System Engineer's Report* identifies deficiencies in Grayson's water supply and distribution system. Specific deficiencies include the pumping capacity of the two wells and areas of the distribution system in which minimum water pressure could not be maintained. To remedy the deficiencies, the *Engineer's Report* recommends capital improvement projects, including construction of a new (third) well with a 400 gallon per minute (gpm) pumping capacity; a new backup generator at one of the existing wells; 900 gpm of additional pump capacity at the existing storage tank; repair and replacement of aging infrastructure; and 4,600 feet of upsized distribution pipelines to ensure adequate fire flow (City of Modesto 2010). In 2014, the City of Modesto applied, unsuccessfully, to the California Department of Water Resources for an Expedited Drought Grant to implement these improvements (California Department of Water Resources 2014a, 2014b).

The Grayson CSD provides wastewater and street lighting service to the Grayson DUC. The Grayson CSD's wastewater collection and treatment system has a designed flow capacity of 100,000 gallons per day and is presently operating at capacity (Stanislaus Local Agency Formation Commission 2014).



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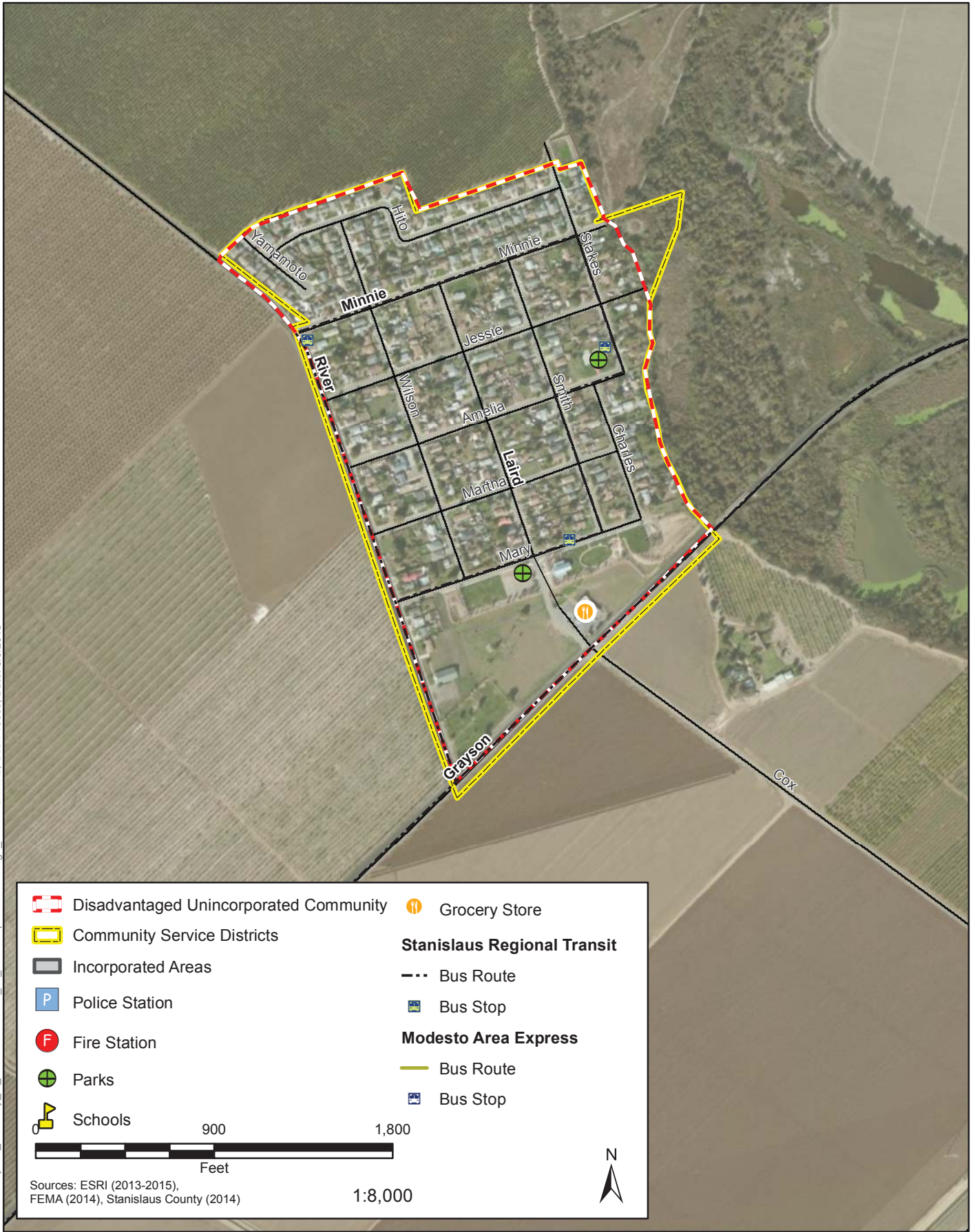


Figure 2-3

Grayson Disadvantaged Unincorporated Community





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Gutters that run along the streets in Grayson drain into storm drain pipes and a detention basin that pumps to the San Joaquin River bottom, where the water flows overland to the river (Stanislaus County 2004). Grayson's storm drainage facilities are in good condition (Stanislaus County 2004).

### 2.3.5 Solid Waste Disposal

Stanislaus County contracts with four franchised solid waste collection companies, Bertolotti Disposal, Gilton Solid Waste, Modesto Disposal/Waste Management, and Turlock Scavenger, for residential and commercial garbage collection service in the unincorporated area (Stanislaus County 2014a). Grayson falls within County-designated Franchise Area 1, served by Bertolotti Disposal (Stanislaus County 2014b). Besides providing solid waste and recyclables collection services to Franchise Area 1, Bertolotti Disposal operates a transfer station, open to the public Mondays through Saturdays, on Flamingo Road in Ceres. Additionally, Stanislaus County's Fink Road Sanitary Landfill, a Class III landfill for nonhazardous municipal solid waste, is operated by the County's Department of Environmental Resources and is open Monday-Saturday to private citizens, school districts, businesses, and local agencies for individual disposal of solid waste (Stanislaus County 2014c).

### 2.3.6 Law Enforcement and Fire Protection

Law enforcement services for Grayson, as for the rest of unincorporated Stanislaus County and four contract cities, are provided by the Stanislaus County Sheriff's Department. The operations division of the Sheriff's Department provides law enforcement services to over 200,000 people in a 1,521-square-mile area (Stanislaus County Sheriff's Department 2014). Two units—patrol and investigations—comprise the Sheriff's Department operations division. The patrol unit responds to calls for assistance, investigates crime, makes arrests, and performs preventive patrol services (Stanislaus County Sheriff's Department 2014). The investigations unit follows up reports of major crimes, collects and prepares evidence for trials, apprehends offenders, and recovers stolen property (Stanislaus County Sheriff's Department 2014).

The nearest sheriff's station to Grayson is the main station, approximately 10.5 miles east at 250 East Hackett Road in Ceres. In addition, the Patterson police station, located approximately 8 miles southeast of Grayson in the city of Patterson, is staffed by the Stanislaus County Sheriff's Department, which provides contract police services to Patterson under the title of Patterson Police Services (Stanislaus Local Agency Formation Commission 2013).

The crime rates presented below were compiled by AGS using the primary reporting categories from the FBI 2005 - 2010 Uniform Crime Report databases along with preliminary 2011 release data and census data related to socioeconomic characteristics. The crimes are divided into two main categories, personal crimes (murder, rape, robbery, and assault) and property crimes (burglary, larceny, and motor vehicle theft). These crime rates are based on a comparison of the average local crime rate to the national average for the same crime, with a crime index of 100 considered average; scores above 100 are therefore considered greater, or worse, than average. For example, a score of 130 would represent a crime rate 30% greater than the national average for that type of crime. These crime rates are unweighted (i.e., a murder and a theft carry the same weight for calculation purposes), and are tracked at the census block group level and above, which may not correspond precisely to the DUC boundaries. Census blocks are the smallest geographic area for which the United States Census Bureau collects and tabulates data; a set of these constitutes a census block

group. Census blocks vary widely in geographic size, and are generally smaller in urban areas and progressively larger in suburban, rural, or remote areas; a given block group is larger in area and population than the individual census blocks of which it is made, and generally contains between 600 and 3,000 people (United States Census Bureau 1994). Grayson falls within census block group 060990033.001.

The overall personal crime and property crime indices for Grayson are 181 and 190, respectively, which means that personal crimes in Grayson occur at a rate 81% greater than the average nationwide, and property crimes occur at a rate 90% greater than the national average. The general and individual crime indices for these categories are shown in Table 2-9 below.

**Table 2-9. Grayson Crime Indices**

| Personal Crime       |     | Property Crime       |     |
|----------------------|-----|----------------------|-----|
| Personal Crime Index | 181 | Property Crime Index | 190 |
| Murder               | 88  | Burglary             | 383 |
| Rape                 | 114 | Larceny              | 201 |
| Robbery              | 21  | Motor Vehicle Theft  | 31  |
| Assault              | 429 |                      |     |

Source: Applied Geographic Solutions and Atlas Publishing 2012.

The West Stanislaus FPD provides fire protection, emergency, and rescue services to Grayson, as well as to Crows Landing, Diablo Grande, and Westley (Emergency Services Consulting 2007). District-wide, 5 full-time firefighters per shift and 100 volunteers staff the West Stanislaus County Fire Protection District (Stanislaus Local Agency Formation Commission 2007). The West Stanislaus FPD’s Fire Station No. 3 is located approximately 1 mile away from Grayson at 8598 Kern Street in Westley and houses WSF-Engine 3, WSF-Water Tender 3, and WSF-Rescue 3 (West Stanislaus Fire Protection District 2014). Volunteer firefighters staff the Westley Station (West Stanislaus Fire Protection District 2014).

A fire department’s ability to meet the fire protection needs of its service area is typically evaluated by the Insurance Services Office (ISO), a private organization that assesses risks, including fire protection, for insurance purposes. The ISO considers a variety of factors, including a district’s fire-fighting apparatus, staffing, training, location, and water supply, to rate fire departments on a scale from 1 (best fire protection possible) to 10 (no fire protection). The ISO rating therefore reflects a fire department’s ability to protect the residents and businesses within its service area from fire. The West Stanislaus County FPD carries an ISO rating of 4 (West Stanislaus Fire Protection District 2015).

### 2.3.7 Schools and Community Amenities

Grayson lies within the boundaries of the Patterson Unified School District, which includes a total of 8 schools serving 6,023 students in grades K–12 (Stanislaus County Office of Education 2009; California Department of Education 2014e). The nearest elementary school to the community is Grayson Charter, approximately 2 miles southwest in Westley. Grayson Charter provides a dual-language immersion program in English and Spanish to 262 children in grades K–5 (California Department of Education 2014b). The nearest non-charter elementary school is Northmead

Elementary, located approximately 7 miles southwest in Patterson. Northmead Elementary serves 572 students in grades K–5 (California Department of Education 2014c). The nearest middle school to Grayson is Creekside Middle School in Patterson, serving 1,201 students in grades 6–8 (California Department of Education 2014a). The nearest high school to Grayson is Patterson High School, located approximately 8 miles southwest in Patterson and serving 1,690 students in grades 9–12 (California Department of Education 2014d).

Three public park facilities operated and maintained by the Stanislaus County Department of Parks and Recreation are present in the community of Grayson: Leroy F. Fitzsimmons Memorial Park, United Community Center and Park, and Laird Regional Park. Leroy F. Fitzsimmons Memorial Park is located on the eastern edge of Grayson at the corner of Amelia and Stakes Streets. The 0.5-acre park has a basketball court, picnic shelter, tables, and playground equipment (Stanislaus County n.d.). The 5-acre United Community Center and Park is at the intersection of Laird and Mary Streets, and includes a 3,165 square-foot community center building that serves as a meeting space for local events, recreational programs, after-school activities, and community programs (Stanislaus County n.d.). The park features play equipment, an amphitheater lawn area, barbecues, picnic tables, basketball courts, and informal play areas (Stanislaus County n.d.). Laird Park is a 97-acre regional park approximately 2 miles east of the community on the San Joaquin River. Laird Park features a baseball/softball field, a soccer field, informal play areas, picnic shelters with picnic tables and barbecues, river access, and an unpaved parking area (Stanislaus County n.d.). No restrooms are available at either Leroy F. Fitzsimmons Memorial Park or Laird Park (Stanislaus County n.d.).

One small convenience market with gas pumps and a laundromat, the One-Stop Market, is located in Grayson. The nearest full-service grocery stores are El Mercadito and the Westley Market/El Paisano Supermarket, both on Highway 33 in Westley, about 2 miles southwest of Grayson.

### 2.3.8 Air Quality and Chronic Health Conditions

Stanislaus County is within the northern part of the eight-county SJVAPCD, the regional public health agency responsible for air quality management in those eight counties. SJVAPCD cites several factors that contribute to the valley's air quality challenges, including high rates of chronic poverty and unemployment coupled with a high population growth rate, the presence of major transportation corridors, and topographic features such as the surrounding mountains combined with the area's meteorological conditions (San Joaquin Valley Air Pollution Control District 2014a). SJVAPCD notes that ozone, PM10, and PM2.5 are of special concern, causing or exacerbating a variety of health conditions (San Joaquin Valley Air Pollution Control District 2014a). The presence of PM2.5, primarily a winter condition, triggers heart attacks, asthma, bronchitis, and respiratory infections, and has a strong correlation with hospital admissions and deaths (San Joaquin Valley Air Pollution Control District 2014a).

GHGs are not a criteria air pollutant and do not directly affect human health. GHG emissions are largely the result of combustion, decay and digestive processes, and emissions of industrial gases with high climate change potential. Unlike criteria pollutants such as carbon monoxide, PM10, PM2.5, and ozone, GHGs do not collect within a specific area or air basin. Their harm is done at a global level through the effect of increased concentrations of GHGs in Earth's atmosphere.

Worldwide concern over GHG emissions is based on the climate change that they are causing by altering the way in which Earth's atmosphere traps solar radiation as heat. The adverse effects of global climate change include rising sea levels, changes in habitat conditions for plants and animals,

increased potential for wildfires, more severe weather extremes, and a reduction in California’s winter snow pack, among others. Through the impetus of AB 32 (California Global Warming Solutions Act of 2006) and other legislation, California has undertaken a statewide program of reducing GHG emissions to 1990 levels by 2020 in order to slow the rate of global climate change.

Climate change can have an indirect effect on human health in Stanislaus County to the extent that it results in warmer summer temperatures that facilitate ozone formation and exacerbate heat-related stress among outdoor workers, the elderly, small children, and the infirm. The amount of GHGs emitted within the Grayson DUC is not atypical for a small, rural community.

SJVAPCD operates 36 air monitoring sites within its eight-county air basin. Of these, two air quality stations, one in Modesto and another in Turlock, monitor air quality within Stanislaus County. The Modesto monitoring site is the closest to Grayson, approximately 11 miles northeast of the community. Table 2-10 shows the SJVAB’s current air quality attainment status for state and federal criteria pollutants (San Joaquin Valley Air Pollution Control District 2012).

**Table 2.10. San Joaquin Valley Air Basin Air Quality Attainment Status**

| Pollutant                     | Designation/Classification         |                         |
|-------------------------------|------------------------------------|-------------------------|
|                               | Federal Standards                  | State Standards         |
| Ozone—1-hour                  | No Federal Standard <sup>a</sup>   | Nonattainment/Severe    |
| Ozone—8-hour                  | Nonattainment/Extreme <sup>b</sup> | Nonattainment           |
| PM 10                         | Attainment <sup>c</sup>            | Nonattainment           |
| PM 2.5                        | Nonattainment <sup>d</sup>         | Nonattainment           |
| Carbon monoxide               | Attainment/Unclassified            | Attainment/Unclassified |
| Nitrogen dioxide              | Attainment/Unclassified            | Attainment              |
| Sulfur dioxide                | Attainment/Unclassified            | Attainment              |
| Lead (particulate)            | No Designation/Classification      | Attainment              |
| Hydrogen sulfide              | No Federal Standard                | Unclassified            |
| Sulfates                      | No Federal Standard                | Attainment              |
| Visibility reducing particles | No Federal Standard                | Unclassified            |
| Vinyl chloride                | No Federal Standard                | Attainment              |

Source: San Joaquin Valley Air Pollution Control District 2012.

<sup>a</sup> Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the San Joaquin Valley air basin (SJVAB) as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

<sup>b</sup> Though the SJVAB was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved SJVAB reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).

<sup>c</sup> On September 25, 2008, EPA redesignated the SJVAB to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.

<sup>d</sup> The SJVAB is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the SJVAB as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).



Over the past decade, ozone levels have been trending downward within the SJVAB and, in 2013, for the first time on record, the air basin overall had zero violations of the federal hourly ozone standard, compared to 281 violations in 1996 (San Joaquin Valley Air Pollution Control District 2014b). At the same time, PM2.5 and PM10 levels have fluctuated with no clear upward or downward trend (California Air Resources Board 2015). Table 2-11 presents the number of days in which Stanislaus County ozone, PM2.5, and PM10 levels exceeded state and federal air quality standards in 2013 (California Air Resources Board 2015).

**Table 2-11. Stanislaus County Days in Exceedance of State and Federal Air Quality Standards, 2013**

| Monitoring Site        | Ozone                        |                                     |                              | PM 2.5                             | PM 10                           |
|------------------------|------------------------------|-------------------------------------|------------------------------|------------------------------------|---------------------------------|
|                        | # Days > State 1-Hr Standard | # Days > National '08 8-Hr Standard | # Days > State 8-Hr Standard | Est Days > National 24-Hr Standard | Est Days > State 24-Hr Standard |
| Modesto 14th St.       | 0                            | 2                                   | 13                           | 37.6                               | 57.7                            |
| Turlock S. Minaret St. | 1                            | 14                                  | 24                           | 40.3                               | 73.7                            |

Source: California Air Resources Board 2015.

The 2013 CHA, prepared by the Stanislaus County Health Services Agency, presents data about the health and well-being of Stanislaus County residents, including information on the burden of five major chronic diseases—hypertension, heart disease, stroke, diabetes and asthma—and the environmental and behavioral factors that influence their prevalence. Primary environmental factors identified in the CHA as contributing to these chronic health conditions are air quality and retail food environment; behavioral factors include diet, fast food consumption, fruit and vegetable consumption, quality of clinical care, physical activity, obesity, and tobacco use (Stanislaus County Health Services Agency 2013). As measured in 2007, Stanislaus County has the second worst retail food environment in California, with 5.48 fast-food purveyors and convenience stores for every grocery store or produce vendor near residences, compared to 4.48 statewide, and a high rate of fast food consumption in the low income population (Stanislaus County Health Services Agency 2013). The county also has the highest prevalence of obesity in the state (31.5% compared to 21.2% statewide), particularly among males, and a higher percentage of smokers than the California average (Stanislaus County Health Services Agency 2013).

The CHA presents countywide data and also divides Stanislaus County into nine geographic regions, shown in Table 2-12 below. Grayson falls within the west side region identified in Table 2-12.

**Table 2-12. Community Health Assessment of Stanislaus County Geographic Regions**

| Region            | Communities  |
|-------------------|--|
| Central           | Modesto (parts) and outlying areas with ZIP codes 95350, 95355, 95357, and 95358                                   |
| East Central      | Airport Neighborhood and East Modesto (parts) with ZIP code 95354  |
| Southeast Side    | Denair, Empire, Hughson, Hickman, La Grange, Waterford with ZIP codes 95316, 95319, 95326, 95323, 95329, and 95386 |
| Northeast Side    | Knights Ferry, Valley Home, Oakdale, Riverbank with ZIP codes 95230, 95361, and 95367                              |
| North Side        | Del Rio, Salida and Modesto (parts) with ZIP codes 95356 and 95368   |
| Southwest Central | West Modesto and South Modesto with ZIP code 95351   |
| West Side         | Crows Landing, Grayson, Newman, Patterson with ZIP codes 95313, 95360, 95363, 95385, and 95387                     |
| South Central     | Ceres, Keyes with ZIP codes 95307 and 95328  |
| South Side        | Turlock with ZIP codes 95380 and 95382   |

Source: Stanislaus County Health Services Agency 2013:Table 1.

Chronic health conditions of concern within Stanislaus County include hypertension, heart disease, stroke, diabetes and asthma. According to the CHA, the percentage of Stanislaus adults diagnosed with high blood pressure increased 31.2% between 2001 and 2009, and surpassed the percentage of California adults diagnosed with high blood pressure use. As of 2009, approximately 30.7% of Stanislaus County adults were diagnosed with hypertension, compared to 26.2% statewide. Among Stanislaus County’s nine regions, the west side, including Grayson, has the lowest rate of hypertension-related emergency room visits, ranks fifth for hypertension-related hospitalizations, and has the second-lowest hypertension-related mortality rate (Stanislaus County Health Services Agency 2013).

The CHA notes that in 2009, 5% of Stanislaus County adults had been diagnosed with heart disease, compared to 5.9% statewide and 12% of adults nationwide. Stanislaus County’s west side has the second-lowest rate among the county’s nine regions for heart disease–related emergency room visits, the lowest rate of heart disease–related hospitalizations, and the fourth-highest mortality rate (Stanislaus County Health Services Agency 2013).

The CHA indicates that the California Health Interview Survey, on which it relies for some data, has not consistently tracked either the overall prevalence of cancer or the rates of individual types of cancer; data for cancer rates is therefore less current than for other, more closely tracked, conditions. Although the percentage of Stanislaus County adults diagnosed with cancer has increased from 7.4% in 2001 to 8.5% in 2005, it remains lower than the statewide rate. However, at a rate of approximately 21.4% of all deaths annually, cancer is the second most common cause of death in Stanislaus County. The west side of Stanislaus County ranks seventh (third-fewest) among the nine regions for cancer-related emergency room visits, has the lowest rate of cancer-related hospitalizations, and has the highest rate of cancer-related mortality (Stanislaus County Health Services Agency 2013).

Diabetes, according to the CHA, affects 8.3% of the United States population and is the seventh leading cause of death nationwide. Within California, from 2001 to 2007, the percentage of people diagnosed with diabetes increased from 6.2% to 8.5%, a 37% increase. Trends in Stanislaus County

are consistent with the statewide increase; in 2009, 7.6% of adults in Stanislaus County had been diagnosed with diabetes. While the prevalence of diabetes was lower in Stanislaus County than California, in 2011, Stanislaus County had higher hospitalization rates than California for four primary indicators of diabetes management, including hospitalization for short-term complications, long-term complications, lower-extremity amputation, and uncontrolled diabetes (Stanislaus County Health Services Agency 2013). Among Stanislaus County's nine regions, the west side has the lowest rate of diabetes-related emergency room visits, the third-lowest rate of hospitalizations, and the highest rate of diabetes-related mortality (Stanislaus County Health Services Agency 2013).

According to the CHA, in 2009 the percentage of Stanislaus County adults diagnosed with asthma was 21.8%, compared to 13.5% of the adult population statewide. The west side region has the second-lowest rate of asthma-related emergency room visits and hospitalizations among the county's nine regions (Stanislaus County Health Services Agency 2013). Due to the low asthma-related death rate, the CHA does not track or rank asthma-related mortality.

The CHA also uses LEB as a measure of quality of life within Stanislaus County and each of its nine regions. LEB is defined as the number of years a newborn infant is projected to live if mortality patterns at the time of its birth were to remain the same throughout its life. The LEB for Stanislaus County is calculated to be 77.2 years, 1.7 years less than the nationwide LEB of 78.9. The LEBs within the nine Stanislaus County regions range from a high of 80.27 years to a low of 75.01 years; the west side region ranks third-highest, with a LEB of 79.58 years (Stanislaus County Health Services Agency 2013).

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## 2.4 Keyes

### 2.4.1 General Characteristics and Demographics

Keyes is a 1,810-acre unincorporated community spanning SR 99 in central Stanislaus County, roughly halfway between the cities of Ceres and Turlock. The northern edge of Keyes is about 1 mile southeast of Ceres and the southern edge of Keyes is about 1 mile northwest of Turlock. Keyes is bordered by Redwood Road on the north, Washington Road on the east, Keyes Road on the south, Faith Home Road on the southwest and SR 99 on the northwest. Turlock Irrigation District's Laterals No. 2 ½ and No. 3 cross Keyes in an east-west direction, SR 99 bisects the southern part of the community from northwest to southeast, and the Union Pacific Railroad tracks parallel the western side of SR 99. Keyes is surrounded by agricultural land, including both field crops and orchards, as well as accompanying agriculture-related structures and residences.

Keyes is a predominantly residential community with some commercial and public uses. Residences in Keyes are primarily single-family dwelling units, with a small quantity of duplexes and multifamily units, and several mobile home parks (United States Census Bureau 2013a). In 2010, Keyes had 1,714 housing units, 1,588 of which were occupied (United States Census Bureau 2013a). Commercial uses in Keyes include large-scale agricultural-industrial facilities and agricultural packing and shipping operations, primarily located west of SR 99. Numerous smaller service and retail businesses, as well as an elementary school, a public library, a fire station, and a United States post office, lie immediately east of SR 99.

Keyes is a CDP with a 2010 census population of 5,601 people in 1,588 households and an average household size of 3.29 (United States Census Bureau 2013a, 2013b). In 2013, the median annual household income in California was \$60,190; in the Keyes CDP it was \$34,967 (United States Census Bureau 2013b).

At 1,810 acres, the Keyes CDP occupies a larger area than the 626-acre Keyes DUC and encompasses surrounding agricultural lands. The majority of these surrounding agricultural lands are identified by the California Department of Conservation's Important Farmlands Inventory as prime farmland (California Department of Conservation 2014). The agricultural lands outside the DUC do not support the requisite level of existing development for consideration under SB 244 and are unlikely to develop in the near future. Therefore, they are not included as part of the Keyes DUC studied for SB 244 purposes.

The General Plan's Housing Element identifies Keyes as a Residential Development Potential Study Area and indicates that available land, infrastructure, and services give Keyes the potential to accommodate 207 additional dwelling units (Stanislaus County 2012). The General Plan's Housing Element notes that a portion of Keyes falls within the Stanislaus County Redevelopment Project Area (Stanislaus County 2012). However, this is of little practical importance with the dissolution of the redevelopment agencies in California. Existing infrastructure and services for Keyes are described below.

### 2.4.2 Infrastructure, Utilities, and Services

Infrastructure, utilities, and services considered for the Keyes DUC are presented in Figure 2-4, *Keyes Disadvantaged Unincorporated Community*, and include transportation facilities and services

including roads, sidewalks, street lighting, and bus stops/service; water, wastewater, and storm drainage systems; solid waste disposal; public safety services such as law enforcement and fire protection; and access to community amenities and services such as schools, parks, and grocery stores. Data associated with chronic health conditions and air quality are described at a regional level because they are not available specifically for the Keyes DUC.

### 2.4.3 Transportation Facilities and Services

Transportation infrastructure in the Keyes area consists of public highways and roads, railroad tracks, and fixed-route and curb-to-curb bus service. SR 99, a major north-south route through California, passes through the community of Keyes; SR 99 consists of a six-lane divided freeway with limited access points; one on/off ramp, Keyes Road, provides access to and from SR 99 at the south end of Keyes. The nearest on/off ramp to the north of Keyes is Mitchell Road, approximately 0.7 mile north near Ceres. The Union Pacific railroad tracks bisect Keyes immediately west of and parallel to SR 99.

With the exception of SR 99, Faith Home Road, and Keyes Road, roadways within Keyes presently consist of two-lane local roads. Both Faith Home Road and Keyes Road two-lane major roads classified by the California Department of Transportation as major collectors (California Department of Transportation 2014; Stanislaus Council of Governments 2014). The County General Plan classifies Faith Home Road as a collector south of Keyes Road, and as a four-lane expressway north of Keyes Road; Keyes Road is classified as a major four-lane road west of Keyes Road, a six-lane expressway south of Keyes, and a four-lane expressway east of Washington Road (Stanislaus County 2006). Rohde Road/7<sup>th</sup> Street, paralleling the northeastern side of SR 99 through Keyes, is classified as a collector (Stanislaus County 2006). Collectors are intended to provide direct access to abutting property as well as movement of moderate volumes of people and goods for medium length trips, and serve as transition facilities, carrying traffic from lower to higher level roads, while expressways are intended to move high volumes of people and goods between urban areas within the county (Stanislaus County 2006).

Curbs, gutters, and street lights are present on the majority of roadways in and around Keyes, particularly in the central and outlying residential areas. One commercial area around Starlite Drive lies outside the boundaries of CSAs No. 5 and No. 26, but within the boundary of the Keyes CSD, and lacks curbs, gutters, and sidewalks. With the exception of one small segment of Jessup Road that has a curb and gutter, the area southwest of SR 99, comprised predominantly of agricultural-industrial and commercial uses with several single-family residences, lacks curbs, gutters, sidewalks, and street lights.

In 2009 Stanislaus County installed curbs, gutters, handicap curb returns, new street sections, and a storm drain collection system in an area generally bounded by SR 99 on the west, Anna Street on the north, the Bonita Ranch Subdivision on the east, and Nunes Road on the south (Stanislaus County 2009). When the County constructed curbs and gutters in 2009, individual property owners were given the opportunity to install sidewalks fronting their property at their own expense. Sidewalks are primarily limited to newer residential neighborhoods on the north, east, and south sides of town and, in the central area to those properties whose owners opted to install them during curb and gutter construction in 2009. The Keyes CSD provides street lighting service to areas within its approximately 444-acre boundary (Stanislaus Local Agency Formation Commission 2014).



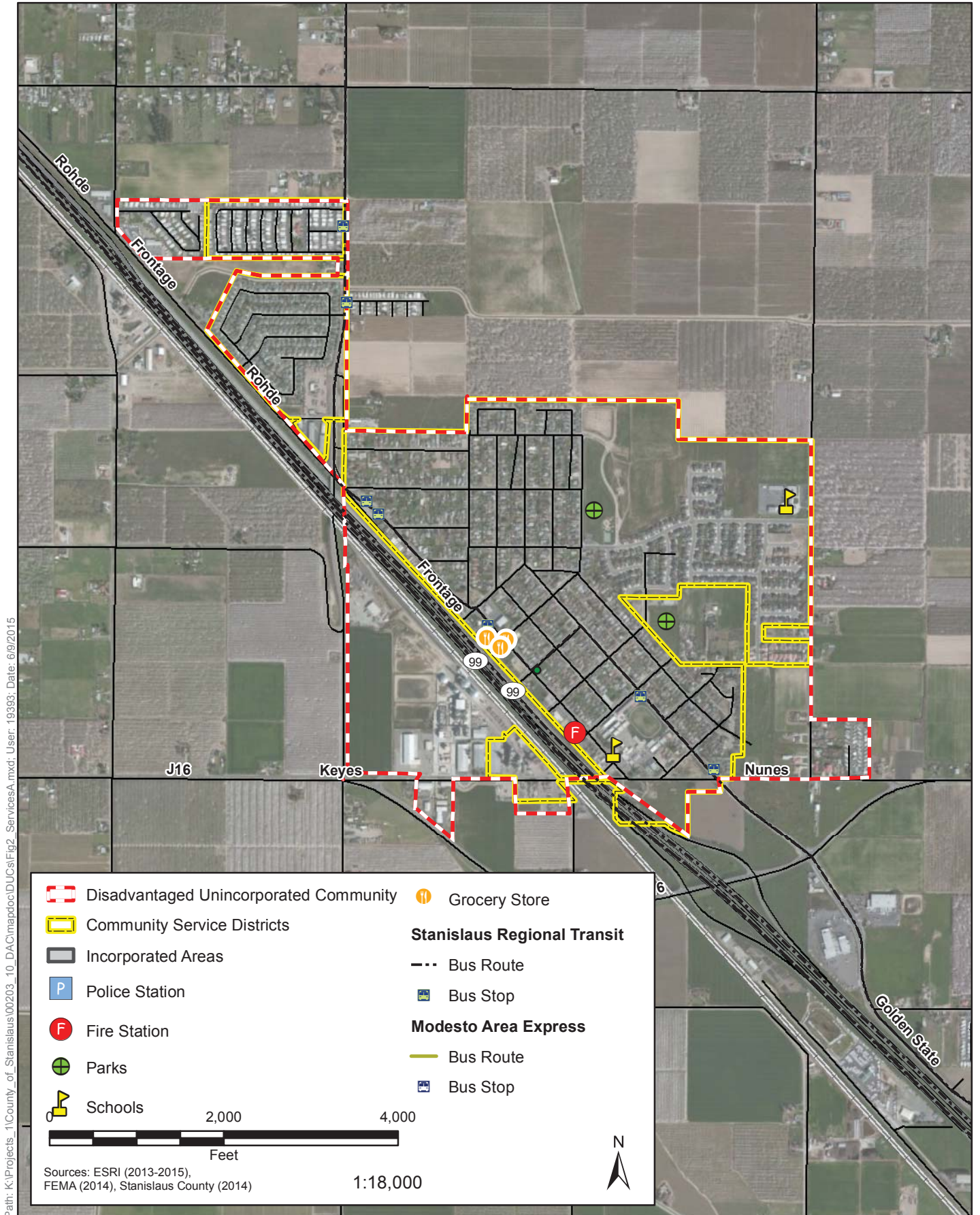


Figure 2-4  
Keyes Disadvantaged Unincorporated Community



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Fixed-route bus service on StaRT Route 15 connects Keyes to surrounding cities; Route 10 Express and Route 70 buses run through Keyes Monday–Friday without stopping on their trips between Modesto and Turlock (Stanislaus Regional Transit 2014a). Route 15 provides 12 round trips between Modesto and Turlock, with stops in Ceres and Keyes, Monday–Friday from 4:50 a.m. to 9:46 p.m., and 8 round trips on Saturdays between 6:30 a.m. and 8:32 p.m. (Stanislaus Regional Transit 2014a). From the Modesto Downtown Transit Center, passengers can transfer to buses traveling to other Stanislaus County communities, as well as to the Modesto Amtrak station, the ACE train station in Lathrop, and the Dublin BART station (City of Modesto 2009; Stanislaus Regional Transit 2014a). In addition, Keyes falls within the Turlock-Modesto Shuttle service area. The Turlock-Modesto Shuttle provides curb-to-curb service between the cities of Modesto, Ceres, and Turlock, the communities of Denair and Keyes, and surrounding rural areas (Stanislaus Regional Transit 2014a). Turlock-Modesto Shuttle runs Monday–Saturday, with four southbound trips between 7:00 a.m. and 4:00 p.m. and four northbound trips between 8:30 a.m. and 5:30 p.m. (Stanislaus Regional Transit 2014b).

#### 2.4.4 Water, Wastewater, and Stormwater Drainage Systems

The Keyes CSD provides sewer and water services to the community of Keyes, and has a contractual agreement with the City of Turlock for sewer disposal services (Stanislaus Local Agency Formation Commission 2014). Together, CSA No. 5 and CSA No. 26 provide storm drainage service to approximately 372 acres of the community (Stanislaus Local Agency Formation Commission 2010). The boundaries of these CSAs roughly correspond to those of the Keyes CSD, which encompasses approximately 444 acres (Stanislaus Local Agency Formation Commission 2014).

The Keyes CSD provides its 444-acre district with domestic water from four groundwater wells (Stanislaus Local Agency Formation Commission 2014). Poor water quality is an issue in Keyes, as the level of arsenic in the groundwater exceeds the state’s maximum contaminant levels; the Keyes CSD is in the process of establishing treatment facilities to remediate this contaminant (Stanislaus Local Agency Formation Commission 2014). Most of the developed area of Keyes falls within the Keyes CSD boundaries. Some urban uses, including two mobile home parks, are outside the Keyes CSD’s boundaries but within its approximately 793-acre sphere of influence. Those uses are not presently served by the CSD. These areas currently rely on onsite wells for their water supply (Stanislaus Local Agency Formation Commission 2014). Once the water treatment facilities are completed, and pending Local Agency Formation Commission (LAFCO) approval of either an out-of-boundary service extension or annexation, the Keyes CSD plans to serve the mobile home parks outside its present boundaries with arsenic-free drinking water (Stanislaus Local Agency Formation Commission 2014).

Wastewater from the Keyes CSD is sent to the Turlock Regional Water Quality Control Facility for treatment (East Stanislaus Regional Water Management Partnership 2013). Scattered urban uses within the Keyes CSD sphere of influence, including the abovementioned mobile home parks, are presently served by onsite septic systems (Stanislaus Local Agency Formation Commission 2014). Although the Keyes CSD is meeting the needs of customers within its existing boundaries, the district recently purchased an additional 25,000 gallons per day of sewage treatment capacity from the City of Turlock, and developers have purchased capacity for future developments in Keyes (Stanislaus Local Agency Formation Commission 2014).

Stormwater drainage poses a challenge in Keyes due to the high water table, only 2.5 feet below the surface in some areas (Stanislaus County 2004). In 2009 Stanislaus County installed curbs, gutters, a

storm drain collection system, and related facilities in an area of Keyes generally bounded by SR 99 on the west, Anna Street on the north, the Bonita Ranch Subdivision on the east, and Nunes Road on the south (Stanislaus County 2009). The County also expanded Keyes' existing drainage basin and excavated an extension to the north of the basin (Stanislaus County 2009). Drainage in the remaining area of Keyes is provided by CSAs No. 5 and No. 26 via roadside ditches and detention basins (Stanislaus Local Agency Formation Commission 2010). Some of the basins allow only for percolation; the Starlite Place storm drain discharges to Turlock Irrigation District Lateral 2 ½ at Faith Home Road and CSA #26 discharges stormwater to Turlock Irrigation District Lateral 2 ½ just east of 10<sup>th</sup> Street (Stanislaus County 2004).

## 2.4.5 Solid Waste Disposal

Stanislaus County contracts with four franchised solid waste collection companies, Bertolotti Disposal, Gilton Solid Waste, Modesto Disposal/Waste Management, and Turlock Scavenger, for residential and commercial garbage collection service in unincorporated Stanislaus County (Stanislaus County 2014c). Keyes falls within County-designated Franchise Area 1, served by Bertolotti Disposal (Stanislaus County 2014b). Besides providing solid waste and recyclables collection services to Franchise Area 1, Bertolotti Disposal operates a transfer station, open to the public Mondays through Saturdays, on Flamingo Road in Ceres. Additionally, Stanislaus County's Fink Road Sanitary Landfill, a Class III landfill for nonhazardous municipal solid waste, is operated by the County's Department of Environmental Resources and is open Monday–Saturday to private citizens, school districts, businesses, and local agencies for individual disposal of solid waste (Stanislaus County 2014a).

## 2.4.6 Law Enforcement and Fire Protection

Law enforcement services for Keyes, as for the rest of unincorporated Stanislaus County and four contract cities, are provided by the Stanislaus County Sheriff's Department. The nearest sheriff's station to Keyes is the main station, about 4.5 miles northwest at 250 East Hackett Road in Ceres. The County Sheriff's Department also operates and staffs the Hughson police station, located approximately 3.5 miles northeast of Keyes in the city of Hughson (Stanislaus Local Agency Formation Commission 2005).

The Ceres police station is approximately 2.5 miles northwest of Keyes; however, the City of Ceres does not typically provide law enforcement services beyond its boundaries except under joint actions (Stanislaus Local Agency Formation Commission and City of Ceres 2012).

The operations division of the Sheriff's Department provides law enforcement services to over 200,000 people in a 1,521-square-mile area (Stanislaus County Sheriff's Department 2014). Two units—patrol and investigations—comprise the Sheriff's Department operations division. The patrol unit responds to calls for assistance, investigates crime, makes arrests, and performs preventive patrol services (Stanislaus County Sheriff's Department 2014). The investigations unit follows up reports of major crimes, collects and prepares evidence for trials, apprehends offenders, and recovers stolen property (Stanislaus County Sheriff's Department 2014).

The crime rates presented below were compiled by AGS using the primary reporting categories from the FBI 2005 – 2010 Uniform Crime Report databases along with preliminary 2011 release data and census data related to socioeconomic characteristics. The crimes are divided into two main categories, personal crimes (murder, rape, robbery, and assault) and property crimes (burglary,

larceny, and motor vehicle theft). These crime rates are based on a comparison of the average local crime rate to the national average for the same crime, with a crime index of 100 considered average; scores above 100 are therefore considered greater, or worse, than average. For example, a score of 130 would represent a crime rate 30% greater than the national average for that type of crime. These crime rates are unweighted (i.e., a murder and a theft carry the same weight for calculation purposes), and are tracked at the census block group level and above, which may not correspond precisely to the DUC boundaries. Census blocks are the smallest geographic area for which the United States Census Bureau collects and tabulates data; a set of these constitutes a census block group. Census blocks vary widely in geographic size, and are generally smaller in urban areas and progressively larger in suburban, rural, or remote areas; a given block group is larger in area and population than the individual census blocks of which it is made, and generally contains between 600 and 3,000 people (United States Census Bureau 1994). Keyes DUC falls within two census block groups. Most of Keyes east of SR 99 falls within census block group 060990030.023; the area west of SR 99, including the southwest portion of the DUC west of SR 99 and the northernmost portion of the DUC between SR 99 and Faith Home Road, falls within census block group 060990030.022.

The overall personal crime and property crime indices for most of Keyes (census block group 060990030.023) are 121 and 34, respectively, which means that personal crimes in that area occur at a rate 21% higher than the nationwide average, and property crimes occur at a rate 34% of the national average. For the outlying areas, northern and western Keyes (census block group 060990030.022), the overall personal crime and property crime indices are both 148. The general and individual crime indices for these categories are shown in Table 2-13 below.

**Table 2-13. Keyes Crime Indices**

| Block Group          | Personal Crime |               | Block Group          | Property Crime |               |
|----------------------|----------------|---------------|----------------------|----------------|---------------|
|                      | 060990030.022  | 060990030.023 |                      | 060990030.022  | 060990030.023 |
| Personal Crime Index | 148            | 121           | Property Crime Index | 148            | 34            |
| Murder               | 151            | 57            | Burglary             | 181            | 66            |
| Rape                 | 119            | 205           | Larceny              | 104            | 38            |
| Robbery              | 76             | 136           | Motor Vehicle Theft  | 12             | 5             |
| Assault              | 209            | 75            |                      |                |               |

Source: Applied Geographic Solutions and Atlas Publishing 2012.

The Keyes FPD provides fire protection, emergency response, and rescue services to a 20-square-mile area encompassing the community of Keyes (Emergency Services Consulting 2007). The Keyes FPD boundary abuts those of the Ceres, Hughson, Denair, Turlock Rural, and Mountain View FPDs (Emergency Services Consulting 2007). Small parts of the district fall within the spheres of influence of the cities of Ceres and Turlock (Emergency Services Consulting 2007). The Keyes FPD staffs one fire station, located at 5625 7th Street in Keyes, with 28 volunteers (Emergency Services Consulting 2007). These volunteers operate the district’s three engines, one water tender, and rescue vehicle (Emergency Services Consulting 2007).

A fire department’s ability to meet the fire protection needs of its service area is typically evaluated by the Insurance Services Office (ISO), a private organization that assesses risks, including fire

protection, for insurance purposes. The ISO considers a variety of factors, including a district's fire-fighting apparatus, staffing, training, location, and water supply, to rate fire departments on a scale from 1 (best fire protection possible) to 10 (no fire protection). The ISO rating therefore reflects a fire department's ability to protect the residents and businesses within its service area from fire. The Keyes FPD carries an ISO rating of 5 within its urbanized area and 9 for rural portions of its service area (Emergency Services Consulting 2007).

## 2.4.7 Public Services and Community Amenities

Keyes is served by the Keyes Union School District, comprised of 3 schools with 1,071 students in grades K–12 plus two preschool programs, Keyes Head Start and Keyes Preschool (Keyes Union School District 2012; Stanislaus County Office of Education 2009). One elementary school, Keyes Elementary, is located in Keyes and serves 518 children in grades K–5 (California Department of Education 2014b). The district's middle school, Barbara Spratling Middle School, serves 202 students in grades 6–8 (California Department of Education 2014a). The district's third school, Keyes to Learning Charter School, provides both classroom-based and home-study educational programs for 351 students in grades K–12; of these, 91 children are in grades 9–12 (California Department of Education 2014c; Keyes to Learning Charter School 2013).

Two parks, Bonita Ranch Park and Hatch Park, are located within Keyes and maintained by CSA No. 26 (Stanislaus Local Agency Formation Commission 2010). Both the 7-acre Bonita Ranch Park and the 4-acre Hatch Park are on the eastern side of Keyes. Bonita Ranch Park features picnic tables, a basketball court, soccer field, play structures, drinking fountains, paved pathways, and lighting (Stanislaus County n.d.). There are no restrooms at this facility (Stanislaus County n.d.). Hatch Park includes a baseball/softball field, community center, parking area and informal play area.

Keyes has three grocery stores, Tower Super Market, Food Cost U Less, and Keyes Market; all three are located at the intersection of 7<sup>th</sup> Street and Christine Street in central Keyes. Tower Super Market is a small, full-service market; Food Cost U Less and Keyes Market are small convenience markets. An additional convenience store, Dollar General, is under construction at 5521 7<sup>th</sup> Street and scheduled to open in late 2015. The nearest large-scale, full-service supermarket is Safeway, approximately 3.25 miles south of Keyes in Turlock.

## 2.4.8 Air Quality and Chronic Health Conditions

Stanislaus County is within the northern part of the eight-county SJVAPCD, the regional public health agency responsible for air quality management in those eight counties. SJVAPCD cites several factors that contribute to the valley's air quality challenges, including high rates of chronic poverty and unemployment coupled with a high population growth rate, the presence of major transportation corridors, and topographic features such as the surrounding mountains combined with the area's meteorological conditions (San Joaquin Valley Air Pollution Control District 2014a). SJVAPCD notes that ozone, PM<sub>10</sub>, and PM<sub>2.5</sub> are of special concern, causing or exacerbating a variety of health conditions (San Joaquin Valley Air Pollution Control District 2014a). The presence of PM<sub>2.5</sub>, primarily a winter condition, triggers heart attacks, asthma, bronchitis, and respiratory infections, and has a strong correlation with hospital admissions and deaths (San Joaquin Valley Air Pollution Control District 2014a).

GHGs are not a criteria air pollutant and do not directly affect human health. GHG emissions are largely the result of combustion, decay and digestive processes, and emissions of industrial gases

with high climate change potential. Unlike criteria pollutants such as carbon monoxide, PM10, PM2.5, and ozone, GHGs do not collect within a specific area or air basin. Their harm is done at a global level through the effect of increased concentrations of GHGs in Earth's atmosphere.

Worldwide concern over GHG emissions is based on the climate change that they are causing by altering the way in which Earth's atmosphere traps solar radiation as heat. The adverse effects of global climate change include rising sea levels, changes in habitat conditions for plants and animals, increased potential for wildfires, more severe weather extremes, and a reduction in California's winter snow pack, among others. Through the impetus of AB 32 (California Global Warming Solutions Act of 2006) and other legislation, California has undertaken a statewide program of reducing GHG emissions to 1990 levels by 2020 in order to slow the rate of global climate change.

Climate change can have an indirect effect on human health in Stanislaus County to the extent that it results in warmer summer temperatures that facilitate ozone formation and exacerbate heat-related stress among outdoor workers, the elderly, small children, and the infirm. The amount of GHGs emitted within the Keyes DUC is not atypical for a small, mixed use community. Although industrial uses are larger emitters than residences and Keyes is larger than the other DUCs in Stanislaus County, the fact that GHGs are not localized pollutants means that its residents are not exposed to any greater effect than the rest of Stanislaus County.

SJVAPCD operates 36 air monitoring sites within its eight-county air basin. Of these, two air quality stations, one in Modesto and another in Turlock, monitor air quality within Stanislaus County. Keyes is almost equidistant from the Modesto and Turlock monitoring sites, approximately 7 miles southeast of the Modesto station and 6.5 miles northwest of the Turlock site. Table 2-14 shows the SJVAB's current air quality attainment status for state and federal criteria pollutants (San Joaquin Valley Air Pollution Control District 2012).



**Table 2-14. San Joaquin Valley Air Basin Air Quality Attainment Status**

| Pollutant                     | Designation/Classification         |                         |
|-------------------------------|------------------------------------|-------------------------|
|                               | Federal Standards                  | State Standards         |
| Ozone—1-hour                  | No Federal Standard <sup>a</sup>   | Nonattainment/Severe    |
| Ozone—8-hour                  | Nonattainment/Extreme <sup>b</sup> | Nonattainment           |
| PM 10                         | Attainment <sup>c</sup>            | Nonattainment           |
| PM 2.5                        | Nonattainment <sup>d</sup>         | Nonattainment           |
| Carbon monoxide               | Attainment/Unclassified            | Attainment/Unclassified |
| Nitrogen dioxide              | Attainment/Unclassified            | Attainment              |
| Sulfur dioxide                | Attainment/Unclassified            | Attainment              |
| Lead (particulate)            | No Designation/Classification      | Attainment              |
| Hydrogen sulfide              | No Federal Standard                | Unclassified            |
| Sulfates                      | No Federal Standard                | Attainment              |
| Visibility reducing particles | No Federal Standard                | Unclassified            |
| Vinyl chloride                | No Federal Standard                | Attainment              |

Source: San Joaquin Valley Air Pollution Control District 2012.

- <sup>a</sup> Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the San Joaquin Valley air basin (SJVAB) as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.
- <sup>b</sup> Though the SJVAB was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).
- <sup>c</sup> On September 25, 2008, EPA redesignated the SJVAB to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.
- <sup>d</sup> The SJVAB is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the SJVAB as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).

Over the past decade, ozone levels have been trending downward within the SJVAB and, in 2013, for the first time on record, the air basin overall had zero violations of the federal hourly ozone standard, compared to 281 violations in 1996 (San Joaquin Valley Air Pollution Control District 2014b). At the same time, PM2.5 and PM10 levels have fluctuated with no clear upward or downward trend (California Air Resources Board 2015). Table 2-15 presents the number of days in which Stanislaus County ozone, PM2.5, and PM10 levels exceeded state and federal air quality standards in 2013 (California Air Resources Board 2015).

**Table 2-15. Stanislaus County Days in Exceedance of State and Federal Air Quality Standards, 2013**

| Monitoring Site        | Ozone                        |                                     |                              | PM 2.5                             | PM 10                           |
|------------------------|------------------------------|-------------------------------------|------------------------------|------------------------------------|---------------------------------|
|                        | # Days > State 1-Hr Standard | # Days > National '08 8-Hr Standard | # Days > State 8-Hr Standard | Est Days > National 24-Hr Standard | Est Days > State 24-Hr Standard |
| Modesto 14th St.       | 0                            | 2                                   | 13                           | 37.6                               | 57.7                            |
| Turlock S. Minaret St. | 1                            | 14                                  | 24                           | 40.3                               | 73.7                            |

Source: California Air Resources Board 2015.

The 2013 CHA, prepared by the Stanislaus County Health Services Agency, presents data about the health and well-being of Stanislaus County residents, including information on the burden of five major chronic diseases—hypertension, heart disease, stroke, diabetes and asthma—and the environmental and behavioral factors that influence their prevalence. Primary environmental factors identified in the CHA as contributing to these chronic health conditions are air quality and retail food environment; behavioral factors include diet, fast food consumption, fruit and vegetable consumption, quality of clinical care, physical activity, obesity, and tobacco use (Stanislaus County Health Services Agency 2013). As measured in 2007, Stanislaus County has the second worst retail food environment in California, with 5.48 fast-food purveyors and convenience stores for every grocery store or produce vendor near residences, compared to 4.48 statewide, and a high rate of fast food consumption in the low income population (Stanislaus County Health Services Agency 2013). The county also has the highest prevalence of obesity in the state (31.5% compared to 21.2% statewide), particularly among males, and a higher percentage of smokers than the California average (Stanislaus County Health Services Agency 2013).

The CHA presents countywide data and also divides Stanislaus County into nine geographic regions, shown in Table 2-16 below. Keyes falls within the south central region identified in Table 2-16.

**Table 2-16. Community Health Assessment of Stanislaus County Geographic Regions**

| Region            | Communities  |
|-------------------|--|
| Central           | Modesto (parts) and outlying areas with ZIP codes 95350, 95355, 95357, and 95358                                   |
| East Central      | Airport Neighborhood and East Modesto (parts) with ZIP code 95354  |
| Southeast Side    | Denair, Empire, Hughson, Hickman, La Grange, Waterford with ZIP codes 95316, 95319, 95326, 95323, 95329, and 95386 |
| Northeast Side    | Knights Ferry, Valley Home, Oakdale, Riverbank with ZIP codes 95230, 95361, and 95367                              |
| North Side        | Del Rio, Salida and Modesto (parts) with ZIP codes 95356 and 95368   |
| Southwest Central | West Modesto and South Modesto with ZIP code 95351   |
| West Side         | Crows Landing, Grayson, Newman, Patterson with ZIP codes 95313, 95360, 95363, 95385, and 95387                     |
| South Central     | Ceres, Keyes with ZIP codes 95307 and 95328  |
| South Side        | Turlock with ZIP codes 95380 and 95382   |

Source: Stanislaus County Health Services Agency 2013:Table 1.

Chronic health conditions of concern within Stanislaus County include hypertension, heart disease, stroke, diabetes and asthma. According to the CHA, the percentage of Stanislaus adults diagnosed with high blood pressure increased 31.2% between 2001 and 2009, and surpassed the percentage of California adults diagnosed with high blood pressure use. As of 2009, approximately 30.7% of Stanislaus County adults were diagnosed with hypertension, compared to 26.2% statewide. Among Stanislaus County's nine regions, the south central region has the fourth-lowest rate of hypertension-related hospitalizations, the second-highest rate of hypertension-related emergency room visits, and the fourth-highest rate of hypertension-related mortality (Stanislaus County Health Services Agency 2013).

The CHA notes that in 2009, 5% of Stanislaus County adults had been diagnosed with heart disease, compared to 5.9% statewide and 12% of adults nationwide. Stanislaus County's south central region has the fourth-lowest rate among the nine regions for heart disease-related emergency room visits, fourth-highest rate of hospitalizations, and third-lowest rate of heart disease-related mortality (Stanislaus County Health Services Agency 2013).

The CHA indicates that the California Health Interview Survey, on which it relies for some data, has not consistently tracked either the overall prevalence of cancer or the rates of individual types of cancer; data for cancer rates is therefore less current than for other, more closely tracked, conditions. Although the percentage of Stanislaus County adults diagnosed with cancer has increased from 7.4% in 2001 to 8.5% in 2005, it remains lower than the statewide rate. However, at a rate of approximately 21.4% of all deaths annually, cancer is the second most common cause of death in Stanislaus County. Stanislaus County's south central region has the fourth-highest rate of cancer-related emergency room visits and hospitalizations among the nine regions, and third-highest rate of cancer-related mortality (Stanislaus County Health Services Agency 2013).

Diabetes, according to the CHA, affects 8.3% of the United States population and is the seventh leading cause of death nationwide. Within California, from 2001 to 2007, the percentage of people diagnosed with diabetes increased from 6.2% to 8.5%, a 37% increase. Trends in Stanislaus County are consistent with the statewide increase; in 2009, 7.6% of adults in Stanislaus County had been diagnosed with diabetes. While the prevalence of diabetes was lower in Stanislaus County than California, in 2011, Stanislaus County had higher hospitalization rates than California for four primary indicators of diabetes management, including hospitalization for short-term complications, long-term complications, lower-extremity amputation, and uncontrolled diabetes (Stanislaus County Health Services Agency 2013). Among Stanislaus County's nine regions, the south central region has the fourth-highest rate of diabetes-related emergency room visits, the fourth-lowest rate of hospitalizations, and the third-lowest rate of diabetes-related mortality (Stanislaus County Health Services Agency 2013).

According to the CHA, in 2009 the percentage of Stanislaus County adults diagnosed with asthma was 21.8%, compared to 13.5% of the adult population statewide. Among Stanislaus County's nine regions, the south central region ranks fifth for asthma-related emergency room visits and third highest for asthma-related hospitalizations (Stanislaus County Health Services Agency 2013). Due to the low asthma-related death rate, the CHA does not track or rank asthma-related mortality.

The CHA also uses LEB as a measure of quality of life within Stanislaus County and each of its 9 regions. LEB is defined as the number of years a newborn infant is projected to live if mortality patterns at the time of its birth were to remain the same throughout its life. The LEB for Stanislaus County is calculated to be 77.2 years, 1.7 years less than the nationwide LEB of 78.9. The LEBs

within the nine Stanislaus County regions range from a high of 80.27 years to a low of 75.01 years; the south central region has the fourth-shortest life expectancy, with a LEB of 78.71 years (Stanislaus County Health Services Agency 2013).

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## 2.5 Monterey Park Tract

### 2.5.1 General Characteristics and Demographics

Monterey Park Tract is an approximately 30-acre rural neighborhood in central Stanislaus County consisting of single-family residential units approximately 4.5 miles southwest of the city of Ceres and 7 miles west of the city of Turlock. In 2010, Monterey Park Tract had 42 housing units, 35 of which were occupied (United States Census Bureau 2013a). Monterey Park Tract is roughly defined by Durango Avenue on the north, Foy Avenue on the east, La Siesta Avenue on the south, and Monterey Avenue on the west. Monterey Park Tract is surrounded by agricultural land and accompanying agriculture-related facilities and residences. The City of Modesto's Jennings Wastewater Treatment Plant and Modesto Compost Facility are located approximately 2.2 miles west of Monterey Park Tract. A variety of agricultural lands surround Monterey Park Tract; the majority of these lands are identified by the California Department of Conservation's Important Farmlands Inventory as prime farmland, with smaller areas of farmland of statewide importance, unique farmland and, immediately southwest and slightly southeast of Monterey Park Tract, confined animal facilities (California Department of Conservation 2014). Much of this area, particularly the adjacent land west, north, and east of the DUC, is also under Williamson Act contract (California Department of Conservation 2012).

Monterey Park Tract is a 30.2-acre CDP with a 2010 census population of approximately 133 people in 35 households (United States Census Bureau 2013a). In 2013, median annual household income in California was \$60,190; in Monterey Park Tract it was \$43,750 (United States Census Bureau 2013b). In addition to the residential uses, a church and a community center are present in Monterey Park Tract.

The General Plan's Housing Element identifies Monterey Park Tract as a Residential Development Potential Study Area that has the potential to accommodate 17 more dwelling units on existing vacant parcels (Stanislaus County 2012). Monterey Park Tract falls within the Stanislaus County Redevelopment Project Area (Stanislaus County 2012). However, this is of little practical importance with the dissolution of the redevelopment agencies in California. Existing infrastructure and services for Monterey Park Tract are described below.

### 2.5.2 Infrastructure, Utilities, and Services

Infrastructure, utilities, and services considered for the Monterey Park Tract DUC are presented in Figure 2-5, *Monterey Park Tract Disadvantaged Unincorporated Community*, and include transportation facilities and services including roads, sidewalks, street lighting, and bus stops/service; water, wastewater, and storm drainage systems; solid waste disposal; public safety services such as law enforcement and fire protection; and access to community amenities and services such as schools, parks, and grocery stores. Data associated with chronic health conditions and air quality are described at a regional level because they are not available specifically for the Monterey Park Tract DUC.

### 2.5.3 Transportation Facilities and Services

Monterey Park Tract lies approximately 6.7 miles west of SR 99, a major north-south travel corridor and a six-lane freeway in Stanislaus County. Transportation infrastructure in the immediate

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**Figure 2-5**  
**Monterey Park Tract Disadvantaged Unincorporated Community**

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Monterey Park Tract area consists of public two-lane roads. The Union Pacific Railroad tracks run northwest-southeast approximately 1.6 miles east of Monterey Park Tract.

The nearest roads outside the neighborhood are Crows Landing Road 0.9 mile to the east, Taylor Road 0.6 mile to the north, Carpenter Road 1 mile to the west, and Monte Vista Avenue 0.1 mile to the south. Crows Landing Road and Carpenter Road are currently two-lane major roads (Stanislaus Council of Governments 2014). Monte Vista Avenue is a two-lane rural collector, and Taylor Road is a two-lane local roadway (Stanislaus Council of Governments 2014). In the vicinity of the Monterey Park Tract DUC, the County General Plan classifies Crows Landing Road as a four-lane expressway, Carpenter Road as a major four-lane road, and both Monte Vista Avenue and Taylor Road as local roadways (Stanislaus County 2006). Expressways are intended to move high volumes of people and goods between urban areas within the county, while local roadways provide direct access to abutting property and movement of small volumes of people and goods for medium length trips in the agricultural areas of the County (Stanislaus County 2006).

Roads within Monterey Park Tract consist of two-lane local roadways and include Durango Avenue on the north, Foy Avenue on the east, La Siesta Avenue on the south, and Monterey Avenue on the west. A small number of street lights are present along each of these roadways. No sidewalks, curbs, or gutters exist within Monterey Park Tract (Stanislaus County 2012).

No bus service is available within Monterey Park Tract. The nearest bus routes are StaRT Routes 40 and 45 East. Route 40 travels east-west on Grayson Road, approximately 3 miles north of Monterey Park Tract; Route 45 East travels east-west on West Main Avenue, 2 miles south of the neighborhood (Stanislaus Regional Transit 2014). Monterey Park Tract lies approximately 2 miles outside the boundary of the Turlock-Modesto Shuttle service area (Stanislaus Regional Transit 2014).

## 2.5.4 Water, Wastewater, and Stormwater Drainage Systems

The Monterey Park Tract CSD provides the Monterey Park Tract community with domestic water from two groundwater wells (Stanislaus Local Agency Formation Commission 2010). Monterey Park Tract has a history of poor water quality, and its water supply has repeatedly exceeded California's Title 22 primary drinking water quality maximum contaminant level (MCL) for nitrate and the secondary MCL for manganese, and also recorded high levels of arsenic (Stanislaus County Board of Supervisors 2015). The Monterey Park Tract CSD commissioned a study, completed in September 2011, to evaluate these water quality problems, analyze water supply alternatives to resolve the problems, and identify the best solution (Fremming, Parson & Pecchenino 2011).

On January 26, 2015, a Water Service Agreement was executed among the Monterey Park Tract CSD, the City of Ceres, and Stanislaus County (Stanislaus County Board of Supervisors 2015). Under the Water Service Agreement, the City of Ceres will provide water to the Monterey Park Tract CSD, which will construct, own, and be responsible for the operation and maintenance of improvements necessary for the delivery of water from the City of Ceres water system. The planned water delivery system will connect to a City of Ceres water main on Crows Landing Road, approximately 0.5 mile south of Service Road, and extend roughly 4.5 miles to the Monterey Park Tract CSD delivery system (Stanislaus County Board of Supervisors 2015).

Wastewater is disposed through private septic systems (Fremming, Parson & Pecchenino 2011). No storm drainage system serves Monterey Park Tract.



## 2.5.5 Solid Waste Disposal

Stanislaus County contracts with four franchised solid waste collection companies, Bertolotti Disposal, Gilton Solid Waste, Modesto Disposal/Waste Management, and Turlock Scavenger, for residential and commercial garbage collection service in unincorporated Stanislaus County (Stanislaus County 2014a). Monterey Park Tract falls within County-designated Franchise Area 1, served by Bertolotti Disposal (Stanislaus County 2014b). Besides providing solid waste and recyclables collection services to Franchise Area 1, Bertolotti Disposal operates a transfer station, open to the public Mondays through Saturdays, on Flamingo Road in Ceres. Additionally, Stanislaus County's Fink Road Sanitary Landfill, a Class III landfill for nonhazardous municipal solid waste, is operated by the County's Department of Environmental Resources and is open Monday–Saturday to private citizens, school districts, businesses, and local agencies for individual disposal of solid waste (Stanislaus County 2014c).

## 2.5.6 Law Enforcement and Fire Protection

Law enforcement services for Monterey Park Tract, as for the rest of unincorporated Stanislaus County and four contract cities, are provided by the Stanislaus County Sheriff's Department. The nearest sheriff's station to Monterey Park Tract is the main station, approximately 5 miles northeast at 250 East Hackett Road in Ceres.

The operations division of the Sheriff's Department provides law enforcement services to over 200,000 people in a 1,521-square-mile area (Stanislaus County Sheriff's Department 2014). Two units—patrol and investigations—comprise the Sheriff's Department operations division. The patrol unit responds to calls for assistance, investigates crime, makes arrests, and performs preventive patrol services (Stanislaus County Sheriff's Department 2014). The investigations unit follows up reports of major crimes, collects and prepares evidence for trials, apprehends offenders, and recovers stolen property (Stanislaus County Sheriff's Department 2014).

The crime rates presented below were compiled by AGS using the primary reporting categories from the FBI 2005 – 2010 Uniform Crime Report databases along with preliminary 2011 release data and census data related to socioeconomic characteristics. The crimes are divided into two main categories, personal crimes (murder, rape, robbery, and assault) and property crimes (burglary, larceny, and motor vehicle theft). These crime rates are based on a comparison of the average local crime rate to the national average for the same crime, with a crime index of 100 considered average; scores above 100 are therefore considered greater, or worse, than average. For example, a score of 130 would represent a crime rate 30% greater than the national average for that type of crime. These crime rates are unweighted (i.e., a murder and a theft carry the same weight for calculation purposes), and are tracked at the census block group level and above, which may not correspond precisely to the DUC boundaries. Census blocks are the smallest geographic area for which the United States Census Bureau collects and tabulates data; a set of these constitutes a census block group. Census blocks vary widely in geographic size, and are generally smaller in urban areas and progressively larger in suburban, rural, or remote areas; a given block group is larger in area and population than the individual census blocks of which it is made, and generally contains between 600 and 3,000 people (United States Census Bureau 1994). The Monterey Park Tract DUC falls within census block group 060990031.001.

The overall personal crime and property crime indices for Monterey Park Tract are 173 and 121, respectively, which means that personal crimes in Monterey Park Tract occur at a rate 73% higher

than the nationwide average, and property crimes occur at a rate 21% higher than the national average. The general and individual crime indices for these categories are shown in Table 2-17 below.

**Table 2-17. Monterey Park Tract Crime Indices**

| Personal Crime       |     | Property Crime       |     |
|----------------------|-----|----------------------|-----|
| Personal Crime Index | 173 | Property Crime Index | 121 |
| Murder               | 235 | Burglary             | 241 |
| Rape                 | 95  | Larceny              | 134 |
| Robbery              | 45  | Motor Vehicle Theft  | 12  |
| Assault              | 276 |                      |     |

Source: Applied Geographic Solutions and Atlas Publishing 2012.

The Westport FPD provides fire protection and emergency response services to the Monterey Park Tract and surrounding area from its one fire station, located approximately 3 miles northwest at 5160 South Carpenter Road. The Westport fire station serves a 45-square-mile area with a staff of 17 volunteer firefighters and houses two engines, one water tender, and one rescue vehicle (Emergency Services Consulting 2007). The station’s workload, defined by the number of incidents per year, increased from just over 100 in 1987 to about 300 in 2005 (Emergency Services Consulting 2007).

A fire department’s ability to meet the fire protection needs of its service area is typically evaluated by the Insurance Services Office (ISO), a private organization that assesses risks, including fire protection, for insurance purposes. The ISO considers a variety of factors, including a district’s fire-fighting apparatus, staffing, training, location, and water supply, to rate fire departments on a scale from 1 (best fire protection possible) to 10 (no fire protection). The ISO rating therefore reflects a fire department’s ability to protect the residents and businesses within its service area from fire. Westport FPD has an ISO rating of 8 within a 5-mile radius of the station (Emergency Services Consulting 2007).

## 2.5.7 Schools and Community Amenities

Monterey Park Tract lies within the boundaries of the Ceres Unified School District, which includes a total of 22 schools enrolling a total of 12,742 students in grades K–12 (Ceres Unified School District 2014a; Stanislaus County Office of Education 2009). The nearest elementary school to Monterey Park Tract is Westport Elementary, 2.8 miles north at 5218 South Carpenter Road; Westport Elementary serves 454 students in grades K–6 (California Department of Education 2014c; Ceres Unified School District 2013). The nearest junior high school is Blaker Kinser Junior High School, serving 612 students in grades 7 and 8, approximately 5.5 miles northeast of Monterey Park Tract at 1601 Kinser Road in Ceres. The nearest high school is Central Valley High School, approximately 4.8 miles northeast at 4033 South Central Avenue in Ceres (California Department of Education 2014a). Central Valley High School serves 1,686 students grades 9–12 (California Department of Education 2014b). The school district provides bus transportation to and from school for students living beyond walking distance to their schools (Ceres Unified School District 2014b).

No parks are present within the Monterey Park Tract. The nearest public park, Las Palmas boat launch facility, is approximately 4.5 miles southwest on the San Joaquin River at Las Palmas/West Main Street. The 3-acre Las Palmas facility occupies 1 mile of riverbank along the western bank of the river and features a concrete boat ramp, parking lot, day use area with picnic tables and barbecues, and restrooms (Stanislaus County n.d.[b]).

Several city parks lie approximately 4.5–4.7 miles northeast of Monterey Park Tract in southwest Ceres. Of these, Sam Ryno Neighborhood Park, at about 4.5 miles, is the closest but has no developed amenities; nearby developed park and recreational facilities include Strawberry Fields Park, Don Pedro Park, and Central Valley High School. Strawberry Fields Park is a neighborhood park featuring picnic facilities and play equipment, and Don Pedro Park features picnic facilities, play equipment, and an adult fitness area (City of Ceres 2010). The City of Ceres considers school facilities to be joint-use recreational facilities (City of Ceres 1997). Developed recreational amenities at Central Valley High School include baseball/softball fields, soccer fields, tennis courts, and a track.

There are no grocery stores in Monterey Park Tract. The nearest grocery store is Charlie's Market, a small convenience market, about 1.5 miles northeast at the corner of Crows Landing Road and Taylor Road. The nearest full-service supermarkets are Magic Market, approximately 4.5 miles northeast of Monterey Park Tract in Ceres, and La Perla Tapatia, about 5 miles north of Monterey Park Tract in Modesto.

## 2.5.8 Air Quality and Chronic Health Conditions

Stanislaus County is within the northern part of the eight-county SJVAPCD, the regional public health agency responsible for air quality management in those 8 counties. SJVAPCD cites several factors that contribute to the valley's air quality challenges, including high rates of chronic poverty and unemployment coupled with a high population growth rate, the presence of major transportation corridors, and topographic features such as the surrounding mountains combined with the area's meteorological conditions (San Joaquin Valley Air Pollution Control District 2014a). The SVAPCD notes that ozone, PM10, and PM2.5 are of special concern, causing or exacerbating a variety of health conditions (San Joaquin Valley Air Pollution Control District 2014a). The presence of PM2.5, primarily a winter condition, triggers heart attacks, asthma, bronchitis, and respiratory infections, and has a strong correlation with hospital admissions and deaths (San Joaquin Valley Air Pollution Control District 2014a).

GHGs are not a criteria air pollutant and do not directly affect human health. GHG emissions are largely the result of combustion, decay and digestive processes, and emissions of industrial gases with high climate change potential. Unlike criteria pollutants such as carbon monoxide, PM10, PM2.5, and ozone, GHGs do not collect within a specific area or air basin. Their harm is done at a global level through the effect of increased concentrations of GHGs in Earth's atmosphere.

Worldwide concern over GHG emissions is based on the climate change that they are causing by altering the way in which Earth's atmosphere traps solar radiation as heat. The adverse effects of global climate change include rising sea levels, changes in habitat conditions for plants and animals, increased potential for wildfires, more severe weather extremes, and a reduction in California's winter snow pack, among others. Through the impetus of AB 32 (California Global Warming Solutions Act of 2006) and other legislation, California has undertaken a statewide program of reducing GHG emissions to 1990 levels by 2020 in order to slow the rate of global climate change.

Climate change can have an indirect effect on human health in Stanislaus County to the extent that it results in warmer summer temperatures that facilitate ozone formation and exacerbate heat-related stress among outdoor workers, the elderly, small children, and the infirm. The amount of GHGs emitted within the Monterey Park Tract DUC is not atypical for a small, largely residential community.

SJVAPCD operates 36 air monitoring sites within its eight-county air basin. Of these, two air quality stations, one in Modesto and another in Turlock, monitor air quality within Stanislaus County. At approximately 8 miles to the northeast, the Modesto monitoring site is the closest to Monterey Park Tract. Table 2-18 shows the SJVAB’s current air quality attainment status for state and federal criteria pollutants (San Joaquin Valley Air Pollution Control District 2012).

**Table 2-18. San Joaquin Valley Air Basin Air Quality Attainment Status**

| Pollutant                     | Designation/Classification         |                         |
|-------------------------------|------------------------------------|-------------------------|
|                               | Federal Standards                  | State Standards         |
| Ozone—1-hour                  | No Federal Standard <sup>a</sup>   | Nonattainment/Severe    |
| Ozone—8-hour                  | Nonattainment/Extreme <sup>b</sup> | Nonattainment           |
| PM 10                         | Attainment <sup>c</sup>            | Nonattainment           |
| PM 2.5                        | Nonattainment <sup>d</sup>         | Nonattainment           |
| Carbon monoxide               | Attainment/Unclassified            | Attainment/Unclassified |
| Nitrogen dioxide              | Attainment/Unclassified            | Attainment              |
| Sulfur dioxide                | Attainment/Unclassified            | Attainment              |
| Lead (particulate)            | No Designation/Classification      | Attainment              |
| Hydrogen sulfide              | No Federal Standard                | Unclassified            |
| Sulfates                      | No Federal Standard                | Attainment              |
| Visibility reducing particles | No Federal Standard                | Unclassified            |
| Vinyl chloride                | No Federal Standard                | Attainment              |

Source: San Joaquin Valley Air Pollution Control District 2012.

- <sup>a</sup> Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the San Joaquin Valley air basin (SJVAB) as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.
- <sup>b</sup> Though the SJVAB was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).
- <sup>c</sup> On September 25, 2008, EPA redesignated the SJVAB to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.
- <sup>d</sup> The SJVAB is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the SJVAB as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).

Over the past decade, ozone levels have been trending downward within the SJVAB and, in 2013, for the first time on record, the air basin overall had zero violations of the federal hourly ozone standard, compared to 281 violations in 1996 (San Joaquin Valley Air Pollution Control District 2014b). At the same time, PM2.5 and PM10 levels have fluctuated with no clear upward or downward trend (California Air Resources Board 2015). Table 2-19 presents the number of days in

which Stanislaus County ozone, PM2.5, and PM10 levels exceeded state and federal air quality standards in 2013 (California Air Resources Board 2015).

**Table 2-19. Stanislaus County Days in Exceedance of State and Federal Air Quality Standards, 2013**

| Monitoring Site        | Ozone                        |                                     |                              | PM 2.5                             | PM 10                           |
|------------------------|------------------------------|-------------------------------------|------------------------------|------------------------------------|---------------------------------|
|                        | # Days > State 1-Hr Standard | # Days > National '08 8-Hr Standard | # Days > State 8-Hr Standard | Est Days > National 24-Hr Standard | Est Days > State 24-Hr Standard |
| Modesto 14th St.       | 0                            | 2                                   | 13                           | 37.6                               | 57.7                            |
| Turlock S. Minaret St. | 1                            | 14                                  | 24                           | 40.3                               | 73.7                            |

Source: California Air Resources Board 2015.

The 2013 CHA, prepared by the Stanislaus County Health Services Agency, presents data about the health and well-being of Stanislaus County residents, including information on the burden of five major chronic diseases—hypertension, heart disease, stroke, diabetes and asthma—and the environmental and behavioral factors that influence their prevalence. Primary environmental factors identified in the CHA as contributing to these chronic health conditions are air quality and retail food environment; behavioral factors include diet, fast food consumption, fruit and vegetable consumption, quality of clinical care, physical activity, obesity, and tobacco use (Stanislaus County Health Services Agency 2013). As measured in 2007, Stanislaus County has the second worst retail food environment in California, with 5.48 fast-food purveyors and convenience stores for every grocery store or produce vendor near residences, compared to 4.48 statewide, and a high rate of fast food consumption in the low income population (Stanislaus County Health Services Agency 2013). The county also has the highest prevalence of obesity in the state (31.5% compared to 21.2% statewide), particularly among males, and a higher percentage of smokers than the California average (Stanislaus County Health Services Agency 2013).

The CHA presents countywide data and also divides Stanislaus County into nine geographic regions, shown in Table 2-20 below. Monterey Park Tract falls within the south central region identified in Table 2-20.



**Table 2-20. Community Health Assessment of Stanislaus County Geographic Regions**

| Region            | Communities  |
|-------------------|--|
| Central           | Modesto (parts) and outlying areas with ZIP codes 95350, 95355, 95357, and 95358                                   |
| East Central      | Airport Neighborhood and East Modesto (parts) with ZIP code 95354  |
| Southeast Side    | Denair, Empire, Hughson, Hickman, La Grange, Waterford with ZIP codes 95316, 95319, 95326, 95323, 95329, and 95386 |
| Northeast Side    | Knights Ferry, Valley Home, Oakdale, Riverbank with ZIP codes 95230, 95361, and 95367                              |
| North Side        | Del Rio, Salida and Modesto (parts) with ZIP codes 95356 and 95368   |
| Southwest Central | West Modesto and South Modesto with ZIP code 95351   |
| West Side         | Crows Landing, Grayson, Newman, Patterson with ZIP codes 95313, 95360, 95363, 95385, and 95387                     |
| South Central     | Ceres, Keyes, Monterey Park Tract with ZIP codes 95307 and 95328   |
| South Side        | Turlock with ZIP codes 95380 and 95382   |

Source: Stanislaus County Health Services Agency 2013:Table 2.

Chronic health conditions of concern within Stanislaus County include hypertension, heart disease, stroke, diabetes and asthma. According to the CHA, the percentage of Stanislaus adults diagnosed with high blood pressure increased 31.2% between 2001 and 2009, and surpassed the percentage of California adults diagnosed with high blood pressure use. As of 2009, approximately 30.7% of Stanislaus County adults were diagnosed with hypertension, compared to 26.2% statewide. Among Stanislaus County’s nine regions, the south central region, including Monterey Park Tract, has the fourth-lowest rate of hypertension-related hospitalizations, the second-highest rate of hypertension-related emergency room visits, and the fourth-highest rate of hypertension-related mortality (Stanislaus County Health Services Agency 2013).

The CHA notes that in 2009, 5% of Stanislaus County adults had been diagnosed with heart disease, compared to 5.9% statewide and 12% of adults nationwide. Stanislaus County’s south central region has the fourth-lowest rate among the nine regions for heart disease–related emergency room visits, fourth-highest rate of hospitalizations, and third-lowest rate of heart disease–related mortality (Stanislaus County Health Services Agency 2013).

The CHA indicates that the California Health Interview Survey, on which it relies for some data, has not consistently tracked either the overall prevalence of cancer or the rates of individual types of cancer; data for cancer rates is therefore less current than for other, more closely tracked, conditions. Although the percentage of Stanislaus County adults diagnosed with cancer has increased from 7.4% in 2001 to 8.5% in 2005, it remains lower than the statewide rate. However, at a rate of approximately 21.4% of all deaths annually, cancer is the second most common cause of death in Stanislaus County. Stanislaus County’s south central region has the fourth-highest rate of cancer-related emergency room visits and hospitalizations among the nine regions, and third-highest rate of cancer-related mortality (Stanislaus County Health Services Agency 2013).

Diabetes, according to the CHA, affects 8.3% of the United States population and is the seventh leading cause of death nationwide. Within California, from 2001 to 2007, the percentage of people diagnosed with diabetes increased from 6.2% to 8.5%, a 37% increase. Trends in Stanislaus County are consistent with the statewide increase; in 2009, 7.6% of adults in Stanislaus County had been

diagnosed with diabetes. While the prevalence of diabetes was lower in Stanislaus County than California, in 2011, Stanislaus County had higher hospitalization rates than California for four primary indicators of diabetes management, including hospitalization for short-term complications, long-term complications, lower-extremity amputation, and uncontrolled diabetes (Stanislaus County Health Services Agency 2013). Among Stanislaus County's nine regions, the south central region has the fourth-highest rate of diabetes-related emergency room visits, the fourth-lowest rate of hospitalizations, and the third-lowest rate of diabetes-related mortality (Stanislaus County Health Services Agency 2013).

According to the CHA, in 2009 the percentage of Stanislaus County adults diagnosed with asthma was 21.8%, compared to 13.5% of the adult population statewide. Among Stanislaus County's nine regions, the south central region ranks fifth for asthma-related emergency room visits and third highest for asthma-related hospitalizations (Stanislaus County Health Services Agency 2013). Due to the low asthma-related death rate, the CHA does not track or rank asthma-related mortality.

The CHA also uses LEB as a measure of quality of life within Stanislaus County and each of its nine regions. LEB is defined as the number of years a newborn infant is projected to live if mortality patterns at the time of its birth were to remain the same throughout its life. The LEB for Stanislaus County is calculated to be 77.2 years, 1.7 years less than the nationwide LEB of 78.9. The LEBs within the nine Stanislaus County regions range from a high of 80.27 years to a low of 75.01 years; the south central region has the fourth-shortest life expectancy, with a LEB of 78.71 (Stanislaus County Health Services Agency 2013).

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## 2.6 Riverdale Park Tract

### 2.6.1 General Characteristics and Demographics

The Riverdale Park Tract DUC is an approximately 200-acre rural residential neighborhood with 175 dwelling units, composed primarily of single-family residential units, within the larger Riverdale Park CDP. The Riverdale Park Tract DUC is roughly defined by the Tuolumne River on the north and west, Vivian Road on the east, and West Whitmore Avenue on the south. The Riverdale Park Tract DUC is immediately west of the City of Modesto's sphere of influence, which aligns with Vivian Road, and approximately 1 mile west of Modesto's city limit.

The Riverdale Park Tract CDP also includes a portion of the Riverdale Park Tract that is located within the City of Modesto's sphere of influence and within the boundaries of the Riverdale Park Tract CSD. Because Government Code Section 65302.10 does not consider the area within a city's sphere of influence to be a DUC for county purposes, that portion of the Riverdale Park Tract is not the subject of this analysis.

The Riverdale Park Tract DUC consists of five census blocks within the Riverdale Park CDP. The CDP had a 2010 census population of approximately 1,128 people in 354 households. In 2013, California's median annual household income was \$60,190; in the Riverdale Park Tract it was \$37,656 (United States Census Bureau 2011, 2013a, 2013b). The DUC had a 2010 census population of 607 people in 164 households, for an average household size of 3.7 people (United States Census Bureau n.d.).

The General Plan's Housing Element identifies Riverdale Park Tract as a Residential Development Potential Study Area; however, the geographic area identified in the Housing Element is northeast and independent of the DUC area considered in this document (Stanislaus County 2012). Existing infrastructure and services for the Riverdale Park Tract DUC are limited and are described below.

### 2.6.2 Infrastructure, Utilities, and Services

Infrastructure, utilities, and services considered for the Riverdale Park Tract DUC are presented in Figure 2-6, *Riverdale Park Tract Disadvantaged Unincorporated Community*, and include transportation facilities and services including roads, sidewalks, street lighting, and bus stops/service; water, wastewater, and storm drainage systems; solid waste disposal; public safety services such as law enforcement and fire protection; and access to community amenities and services such as schools, parks, and grocery stores. Data associated with chronic health conditions and air quality are described at a regional level because they are not available specifically for the Riverdale Park Tract DUC.

### 2.6.3 Transportation Facilities and Services

The Riverdale Park Tract DUC lies approximately 4 miles west of SR 99, a major north-south travel corridor and a six-lane freeway in Stanislaus County. Transportation infrastructure in the immediate Riverdale Park Tract vicinity consists entirely of two-lane local roadways with no curbs, gutters, sidewalks, or streetlights. The nearest two-lane major roadway is Carpenter Road, 1 mile east of the DUC (Stanislaus Council of Governments 2014). The County General Plan designates this segment of



Carpenter Road as a six-lane expressway, intended to move high volumes of people and goods between urban areas within the county (Stanislaus County 2006).

Most of the Riverdale Park Tract DUC falls immediately outside the service areas of three public StaRT shuttle services, the Eastside Shuttle, the Turlock/Modesto Shuttle, and the Waterford/Modesto Runabout (Stanislaus Regional Transit 2014). All of these StaRT shuttles provide curb-to-curb service within designated areas by advance reservation of at least 4 hours, and the Waterford/Modesto Runabout combines curb-to-curb service with several designated fixed stops (Stanislaus Regional Transit 2014). Vivian Road, the easternmost road of the DUC, serves as the western boundary of the Eastside and Turlock/Modesto shuttles, and Hatch Road, which terminates at the northern end of the DUC, forms the southern boundary of the Waterford/Modesto Runabout (Stanislaus Regional Transit 2014).

## 2.6.4 Water, Wastewater, and Stormwater Drainage Systems

No CSD or CSA serves the Riverdale Park Tract DUC. Domestic water within the DUC is provided by individual private wells, and wastewater is disposed through private septic systems. No storm drainage system serves the Riverdale Park Tract DUC.

The Riverdale Park Tract CSD operates a well and storage tanks that provide domestic water services to the residents of the unincorporated community northeast of the DUC between the Tuolumne River and West Hatch Road and contracts with the City of Modesto for its emergency water supply (Stanislaus Local Agency Formation Commission 2011). The Riverdale Park Tract CSD does not serve the Riverdale Park Tract DUC. Its boundary and sphere of influence are coterminous and encompass 58 acres located northeast of the DUC. The CSD's western boundary is 0.3 mile east of the northeastern edge of the DUC (Stanislaus Local Agency Formation Commission 2011).

## 2.6.5 Solid Waste Disposal

Stanislaus County contracts with four franchised solid waste collection companies, Bertolotti Disposal, Gilton Solid Waste, Modesto Disposal/Waste Management, and Turlock Scavenger, for residential and commercial garbage collection service in the unincorporated area (Stanislaus County 2014a). Riverdale Park Tract falls within County-designated Franchise Area 1, served by Bertolotti Disposal (Stanislaus County 2014b). Besides providing solid waste and recyclables collection services to Franchise Area 1, Bertolotti Disposal operates a transfer station, open to the public Mondays through Saturdays, on Flamingo Road in Ceres. Additionally, Stanislaus County's Fink Road Sanitary Landfill, a Class III landfill for nonhazardous municipal solid waste, is operated by the County's Department of Environmental Resources and is open Monday–Saturday to private citizens, school districts, businesses, and local agencies for individual disposal of solid waste (Stanislaus County 2014c).

## 2.6.6 Law Enforcement and Fire Protection

Law enforcement services for Riverdale Park Tract, as for the rest of unincorporated Stanislaus County and four contract cities, are provided by the Stanislaus County Sheriff's Department. The operations division of the Sheriff's Department provides law enforcement services to over 200,000 people in a 1,521-square-mile area (Stanislaus County Sheriff's Department 2014). Two units—patrol and investigations—comprise the Sheriff's Department operations division. The patrol unit



Figure 2-6  
 Riverdale Park Tract Disadvantaged Unincorporated Community



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responds to calls for assistance, investigates crime, makes arrests, and performs preventive patrol services (Stanislaus County Sheriff’s Department 2014). The investigations unit follows up reports of major crimes, collects and prepares evidence for trials, apprehends offenders, and recovers stolen property (Stanislaus County Sheriff’s Department 2014). The nearest sheriff’s station to Riverdale Park Tract is the main station, approximately 3.5 miles southeast at 250 East Hackett Road in Ceres.

The crime rates presented below were compiled by AGS using the primary reporting categories from the FBI 2005 – 2010 Uniform Crime Report databases along with preliminary 2011 release data and census data related to socioeconomic characteristics. The crimes are divided into two main categories, personal crimes (murder, rape, robbery, and assault) and property crimes (burglary, larceny, and motor vehicle theft). These crime rates are based on a comparison of the average local crime rate to the national average for the same crime, with a crime index of 100 considered average; scores above 100 are therefore considered greater, or worse, than average. For example, a score of 130 would represent a crime rate 30% greater than the national average for that type of crime. These crime rates are unweighted (i.e., a murder and a theft carry the same weight for calculation purposes), and are tracked at the census block group level and above, which may not correspond precisely to the DUC boundaries. Census blocks are the smallest geographic area for which the United States Census Bureau collects and tabulates data; a set of these constitutes a census block group. Census blocks vary widely in geographic size, and are generally smaller in urban areas and progressively larger in suburban, rural, or remote areas; a given block group is larger in area and population than the individual census blocks of which it is made, and generally contains between 600 and 3,000 people (United States Census Bureau 1994). The Riverdale Park Tract DUC falls within two large census block groups. Most of the DUC parcels and population, east of Poland Road, fall within census block group 060990031.002; the area west of Poland Road falls within census block group 060990031.003.

The overall personal crime and property crime indices for most of the Riverdale Park Tract DUC (census block group 060990031.002) are 173 and 124, respectively, which means that personal crimes in that area occur at a rate 73% higher than the nationwide average, and property crimes occur at a rate 24% above national average. For the western portion of the DUC (census block group 060990031.003), the overall personal crime and property crime indices are 184 and 166. The general and individual crime indices for these categories are shown in Table 2-21 below.

**Table 2-21. Riverdale Park Tract DUC Crime Indices**

| Block Group          | Personal Crime |               | Block Group          | Property Crime |               |
|----------------------|----------------|---------------|----------------------|----------------|---------------|
|                      | 060990031.002  | 060990031.003 |                      | 060990031.002  | 060990031.003 |
| Personal Crime Index | 173            | 184           | Property Crime Index | 124            | 166           |
| Murder               | 230            | 112           | Burglary             | 245            | 329           |
| Rape                 | 95             | 117           | Larceny              | 136            | 182           |
| Robbery              | 50             | 65            | Motor Vehicle Theft  | 19             | 26            |
| Assault              | 273            | 375           |                      |                |               |

Source: Applied Geographic Solutions and Atlas Publishing 2012.



The Burbank-Paradise FPD provides fire protection and emergency response services to the Riverdale Park Tract DUC and surrounding area from its one fire station, located approximately 2.5 miles northeast on Beverly Drive in Modesto. The Burbank-Paradise FPD fire station serves a 5.5-square-mile area with a staff of 6 paid and 30 volunteer firefighters, and it houses three structure fire engines and one wildland fire engine (Emergency Services Consulting 2007). The station's workload, defined by the number of incidents per year, increased from just under 300 in 1987 to over 800 in 2005 (Emergency Services Consulting 2007).

A fire department's ability to meet the fire protection needs of its service area is typically evaluated by the Insurance Services Office (ISO), a private organization that assesses risks, including fire protection, for insurance purposes. The ISO considers a variety of factors, including a district's fire-fighting apparatus, staffing, training, location, and water supply, to rate fire departments on a scale from 1 (best fire protection possible) to 10 (no fire protection). The ISO rating therefore reflects a fire department's ability to protect the residents and businesses within its service area from fire. The Burbank-Paradise FPD has an ISO rating of 5 in hydrant-served areas and 8 in non-hydrant areas within its district boundaries (Emergency Services Consulting 2007).

## 2.6.7 Schools and Community Amenities

Riverdale Park Tract lies within the boundaries of the Modesto City School District, which is a common administration district comprised of the Modesto City Elementary and Modesto City High School districts (Modesto City Schools 2015). Modesto City Elementary District includes a total of 26 schools serving students in grades K–8. Modesto City High School District serves students in grades 9–12. The nearest elementary school to which K–6 students from Riverdale Park Tract are assigned is Fairview Elementary, which is about 1.5 miles east of the Riverdale Park Tract DUC. Fairview Elementary serves 878 students (California Department of Education 2014b). Fairview Preschool and Head Start are also located on the Fairview Elementary campus. The nearest middle school to Riverdale Park Tract is Evelyn Hanshaw Middle School, approximately 2.5 miles east in Modesto, serving 789 students in grades 7 and 8 (California Department of Education 2014a). The Riverdale Park Tract DUC falls within the attendance zone for Thomas Downey High School, located approximately 6 miles northwest in Modesto. Thomas Downey High School serves 1,974 students in grades 9–12 (California Department of Education 2014c). Modesto City Schools buses elementary students living more than 1 mile from their school, middle school students living more than 2 miles from their school, and high school students living more than 3 miles from their school (Modesto City Schools 2015).

There are no public parks within the Riverdale Park Tract DUC. Nearby parks and recreation facilities include the Riverdale Park and Fishing Access and Fairview Park. The Riverdale Park and Fishing Access is located approximately 0.5 mile northeast of the DUC on the south side of the Tuolumne River at Parkdale Drive. The 3-acre Riverdale Park and Fishing Access features play structures, informal play areas, a picnic shelter and picnic tables, benches, a drinking fountain, a walking trail, parking, and a carry-in boat path to the river, but there are no restroom facilities (Stanislaus County n.d.). Fairview Park, located approximately 1.8 miles east of the Riverdale Park Tract DUC in southwest Modesto near West Whitmore and Tucson Avenues, occupies 4 acres and includes a baseball/softball field, a basketball court, a picnic shelter, picnic tables with barbecues, and informal play areas (Stanislaus County n.d.).

There are no grocery stores in Riverdale Park Tract. The nearest grocery store to Riverdale Park Tract is the Country Market, a small convenience market, approximately 0.75 mile east of the DUC



on West Hatch Road near Woodlane Avenue. The Fairview Market, another small convenience market, is about 2 miles east of the Riverdale Park Tract DUC on Inyo Avenue. The nearest full-service supermarkets are La Perla Tapatia and Mi Pueblo Food Center, both approximately 3.2 miles east of Riverdale Park Tract in Modesto.

## 2.6.8 Air Quality and Chronic Health Conditions

Stanislaus County is within the northern part of the eight-county SJVAPCD, the regional public health agency responsible for air quality management in those 8 counties. SJVAPCD cites several factors that contribute to the valley's air quality challenges, including high rates of chronic poverty and unemployment coupled with a high population growth rate, the presence of major transportation corridors, and topographic features such as the surrounding mountains combined with the area's meteorological conditions (San Joaquin Valley Air Pollution Control District 2014a). SJVAPCD notes that ozone, PM10, and PM2.5 are of special concern, causing or exacerbating a variety of health conditions (San Joaquin Valley Air Pollution Control District 2014a). The presence of PM2.5, primarily a winter condition, triggers heart attacks, asthma, bronchitis, and respiratory infections, and has a strong correlation with hospital admissions and deaths (San Joaquin Valley Air Pollution Control District 2014a).

GHGs are not a criteria air pollutant and do not directly affect human health. GHG emissions are largely the result of combustion, decay and digestive processes, and emissions of industrial gases with high climate change potential. Unlike criteria pollutants such as carbon monoxide, PM10, PM2.5, and ozone, GHGs do not collect within a specific area or air basin. Their harm is done at a global level through the effect of increased concentrations of GHGs in Earth's atmosphere.

Worldwide concern over GHG emissions is based on the climate change that they are causing by altering the way in which Earth's atmosphere traps solar radiation as heat. The adverse effects of global climate change include rising sea levels, changes in habitat conditions for plants and animals, increased potential for wildfires, more severe weather extremes, and a reduction in California's winter snow pack, among others. Through the impetus of AB 32 (California Global Warming Solutions Act of 2006) and other legislation, California has undertaken a statewide program of reducing GHG emissions to 1990 levels by 2020 in order to slow the rate of global climate change.

Climate change can have an indirect effect on human health in Stanislaus County to the extent that it results in warmer summer temperatures that facilitate ozone formation and exacerbate heat-related stress among outdoor workers, the elderly, small children, and the infirm. The amount of GHGs emitted within the Riverdale Park Tract DUC is not atypical for a small, largely residential community.

SJVAPCD operates 36 air monitoring sites within its eight-county air basin. Of these, two air quality stations, one in Modesto and another in Turlock, monitor air quality within Stanislaus County. The Modesto monitoring site, approximately 3.6 miles to the northeast, is the closest monitoring station to Riverdale Park Tract. Table 2-22 shows the SJVAB's current air quality attainment status for state and federal criteria pollutants (San Joaquin Valley Air Pollution Control District 2012).

**Table 2-22. San Joaquin Valley Air Basin Air Quality Attainment Status**

| Pollutant                     | Designation/Classification         |                         |
|-------------------------------|------------------------------------|-------------------------|
|                               | Federal Standards                  | State Standards         |
| Ozone—1-hour                  | No Federal Standard <sup>a</sup>   | Nonattainment/Severe    |
| Ozone—8-hour                  | Nonattainment/Extreme <sup>b</sup> | Nonattainment           |
| PM 10                         | Attainment <sup>c</sup>            | Nonattainment           |
| PM 2.5                        | Nonattainment <sup>d</sup>         | Nonattainment           |
| Carbon monoxide               | Attainment/Unclassified            | Attainment/Unclassified |
| Nitrogen dioxide              | Attainment/Unclassified            | Attainment              |
| Sulfur dioxide                | Attainment/Unclassified            | Attainment              |
| Lead (particulate)            | No Designation/Classification      | Attainment              |
| Hydrogen sulfide              | No Federal Standard                | Unclassified            |
| Sulfates                      | No Federal Standard                | Attainment              |
| Visibility reducing particles | No Federal Standard                | Unclassified            |
| Vinyl chloride                | No Federal Standard                | Attainment              |

Source: San Joaquin Valley Air Pollution Control District 2012.

- <sup>a</sup> Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the San Joaquin Valley air basin (SJVAB) as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.
- <sup>b</sup> Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).
- <sup>c</sup> On September 25, 2008, EPA redesignated the SJVAB to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.
- <sup>d</sup> The SJVAB is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the SJVAB as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).

Over the past decade, ozone levels have been trending downward within the SJVAB and, in 2013, for the first time on record, the air basin overall had zero violations of the federal hourly ozone standard, compared to 281 violations in 1996 (San Joaquin Valley Air Pollution Control District 2014b). At the same time, PM2.5 and PM10 levels have fluctuated with no clear upward or downward trend (California Air Resources Board 2015). Table 2-23 presents the number of days in which Stanislaus County ozone, PM2.5, and PM10 levels exceeded state and federal air quality standards in 2013 (California Air Resources Board 2015).

**Table 2-23. Stanislaus County Days in Exceedance of State and Federal Air Quality Standards, 2013**

| Monitoring Site        | Ozone                        |                                     |                              | PM 2.5                             | PM 10                           |
|------------------------|------------------------------|-------------------------------------|------------------------------|------------------------------------|---------------------------------|
|                        | # Days > State 1-Hr Standard | # Days > National '08 8-Hr Standard | # Days > State 8-Hr Standard | Est Days > National 24-Hr Standard | Est Days > State 24-Hr Standard |
| Modesto 14th St.       | 0                            | 2                                   | 13                           | 37.6                               | 57.7                            |
| Turlock S. Minaret St. | 1                            | 14                                  | 24                           | 40.3                               | 73.7                            |

Source: California Air Resources Board 2015.

The 2013 CHA, prepared by the Stanislaus County Health Services Agency, presents data about the health and well-being of Stanislaus County residents, including information on the burden of five major chronic diseases—hypertension, heart disease, stroke, diabetes and asthma—and the environmental and behavioral factors that influence their prevalence. Primary environmental factors identified in the CHA as contributing to these chronic health conditions are air quality and retail food environment; behavioral factors include diet, fast food consumption, fruit and vegetable consumption, quality of clinical care, physical activity, obesity, and tobacco use (Stanislaus County Health Services Agency 2013). As measured in 2007, Stanislaus County has the second worst retail food environment in California, with 5.48 fast-food purveyors and convenience stores for every grocery store or produce vendor near residences, compared to 4.48 statewide, and a high rate of fast food consumption in the low income population (Stanislaus County Health Services Agency 2013). The county also has the highest prevalence of obesity in the state (31.5% compared to 21.2% statewide), particularly among males, and a higher percentage of smokers than the California average (Stanislaus County Health Services Agency 2013).

The CHA presents countywide data and also divides Stanislaus County into nine geographic regions, shown in Table 2-24 below. The Riverdale Park Tract DUC falls within the central region identified in Table 2-24.

**Table 2-24. Community Health Assessment of Stanislaus County Geographic Regions**

| Region            | Communities  |
|-------------------|--|
| Central           | Modesto (parts) and outlying areas, including Riverdale Park, with ZIP codes 95350, 95355, 95357, and 95358        |
| East Central      | Airport Neighborhood and East Modesto (parts) with ZIP code 95354  |
| Southeast Side    | Denair, Empire, Hughson, Hickman, La Grange, Waterford with ZIP codes 95316, 95319, 95326, 95323, 95329, and 95386 |
| Northeast Side    | Knights Ferry, Valley Home, Oakdale, Riverbank with ZIP codes 95230, 95361, and 95367                              |
| North Side        | Del Rio, Salida and Modesto (parts) with ZIP codes 95356 and 95368   |
| Southwest Central | West Modesto and South Modesto with ZIP code 95351   |
| West Side         | Crows Landing, Grayson, Newman, Patterson with ZIP codes 95313, 95360, 95363, 95385, and 95387                     |
| South Central     | Ceres, Keyes with ZIP codes 95307 and 95328  |
| South Side        | Turlock with ZIP codes 95380 and 95382   |

Source: Stanislaus County Health Services Agency 2013:Table 2.

Chronic health conditions of concern within Stanislaus County include hypertension, heart disease, stroke, diabetes and asthma. According to the CHA, the percentage of Stanislaus adults diagnosed with high blood pressure increased 31.2% between 2001 and 2009, and surpassed the percentage of California adults diagnosed with high blood pressure use. As of 2009, approximately 30.7% of Stanislaus County adults were diagnosed with hypertension, compared to 26.2% statewide. Among Stanislaus County's nine regions, the central region ranks fifth for hypertension-related emergency room visits, has the fourth-highest rate of hypertension-related hospitalizations, and ranks fifth for hypertension-related mortality (Stanislaus County Health Services Agency 2013).

The CHA notes that in 2009, 5% of Stanislaus County adults had been diagnosed with heart disease, compared to 5.9% statewide and 12% of adults nationwide. The central region of Stanislaus County, including Riverdale Park Tract, ranks third lowest among the nine regions for heart disease-related emergency room visits, has the fourth-lowest rate of heart disease-related hospitalizations, and has the third-highest rate of heart disease-related mortality (Stanislaus County Health Services Agency 2013).

The CHA indicates that the California Health Interview Survey, on which it relies for some data, has not consistently tracked either the overall prevalence of cancer or the rates of individual types of cancer; data for cancer rates is therefore less current than for other, more closely tracked, conditions. Although the percentage of Stanislaus County adults diagnosed with cancer has increased from 7.4% in 2001 to 8.5% in 2005, it remains lower than the statewide rate. However, at a rate of approximately 21.4% of all deaths annually, cancer is the second most common cause of death in Stanislaus County. The central region of Stanislaus County has the fourth-lowest rate of cancer-related emergency room visits among the county's nine regions ranks fifth for cancer-related hospitalizations, and has the fourth-highest rate of cancer-related mortality (Stanislaus County Health Services Agency 2013).

Diabetes, according to the CHA, affects 8.3% of the United States population and is the seventh leading cause of death nationwide. Within California, from 2001-2007, the percentage of people diagnosed with diabetes increased from 6.2% to 8.5%, a 37% increase. Trends in Stanislaus County are consistent with the statewide increase; in 2009, 7.6% of adults in Stanislaus County had been diagnosed with diabetes. While the prevalence of diabetes was lower in Stanislaus County than California, in 2011, Stanislaus County had higher hospitalization rates than California for four primary indicators of diabetes management, including hospitalization for short-term complications, long-term complications, lower-extremity amputation, and uncontrolled diabetes (Stanislaus County Health Services Agency 2013). Among Stanislaus County's nine regions, the central region ranks fifth for diabetes-related emergency room visits and hospitalizations, and has the fourth-highest rate of diabetes-related mortality (Stanislaus County Health Services Agency 2013).

According to the CHA, in 2009 the percentage of Stanislaus County adults diagnosed with asthma was 21.8%, compared to 13.5% of the adult population statewide. Among the county's nine geographic regions, the central region has the third-highest rate of asthma-related emergency room visits and ranks fifth for asthma-related hospitalizations (Stanislaus County Health Services Agency 2013). Due to the low asthma-related death rate, the CHA does not track or rank asthma-related mortality.

The CHA also uses LEB as a measure of quality of life within Stanislaus County and each of its nine regions. LEB is defined as the number of years a newborn infant is projected to live if mortality patterns at the time of its birth were to remain the same throughout its life. The LEB for Stanislaus

County is calculated to be 77.2 years, 1.7 years less than the nationwide LEB of 78.9. The LEBs within the nine regions range from a high of 80.27 years to a low of 75.01 years; the area encompassing the Riverdale Park Tract DUC has the second-shortest LEB, 77.73 years (Stanislaus County Health Services Agency 2013).

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## 2.7 Westley

### 2.7.1 General Characteristics and Demographics

Westley is an unincorporated community located roughly 5.5 miles north of the city of Patterson in western Stanislaus County. At 1,116 acres, the Westley CDP occupies a much larger area than the 107-acre area identified as the Westley DUC, and encompasses approximately 1,000 acres of agricultural lands immediately west and northwest of the DUC. These agricultural lands are identified by the California Department of Conservation's Important Farmlands Inventory as prime farmland (California Department of Conservation 2014). Most of the area immediately north of the DUC is under Williamson Act contract (California Department of Conservation 2012). These agricultural lands do not support the requisite level of existing development for consideration under SB 244 and are unlikely to develop; therefore, they are not included as part of the Westley DUC studied for SB 244 purposes.

The Westley DUC has a population of approximately 603 people in 149 households. In 2013, the median annual household income in California was \$60,190; it was \$24,762 in the Westley DUC (United States Census Bureau 2013a, 2013b). Westley DUC is defined by E Street on the north, State Highway 33 on the east, Howard Road on the south, and roughly encompassing the Westley Migrant Center on the west. In addition to residential uses, Westley features a variety of commercial and public uses, including agricultural packing and shipping operations, commercial uses clustered along and near Highway 33 and the Union Pacific Railroad tracks, as well as a fire station, an elementary school, and a United States Post Office. Westley is surrounded by orchards and agriculture-related structures and is roughly bordered on the east by the Union Pacific Railroad tracks and the Westside Irrigation District (WSID) South Lateral canal. Residential uses in Westley consist of single-family residential units and the Stanislaus County Housing Authority's 88-unit Westley Migrant Center housing complex (Stanislaus County 2012; Stanislaus Local Agency Formation Commission 2014).

The General Plan's Housing Element identifies Westley as a Residential Development Potential Study Area and indicates that it has the capacity to accommodate only one more dwelling unit (Stanislaus County 2012). Existing infrastructure and services for Westley are described below.

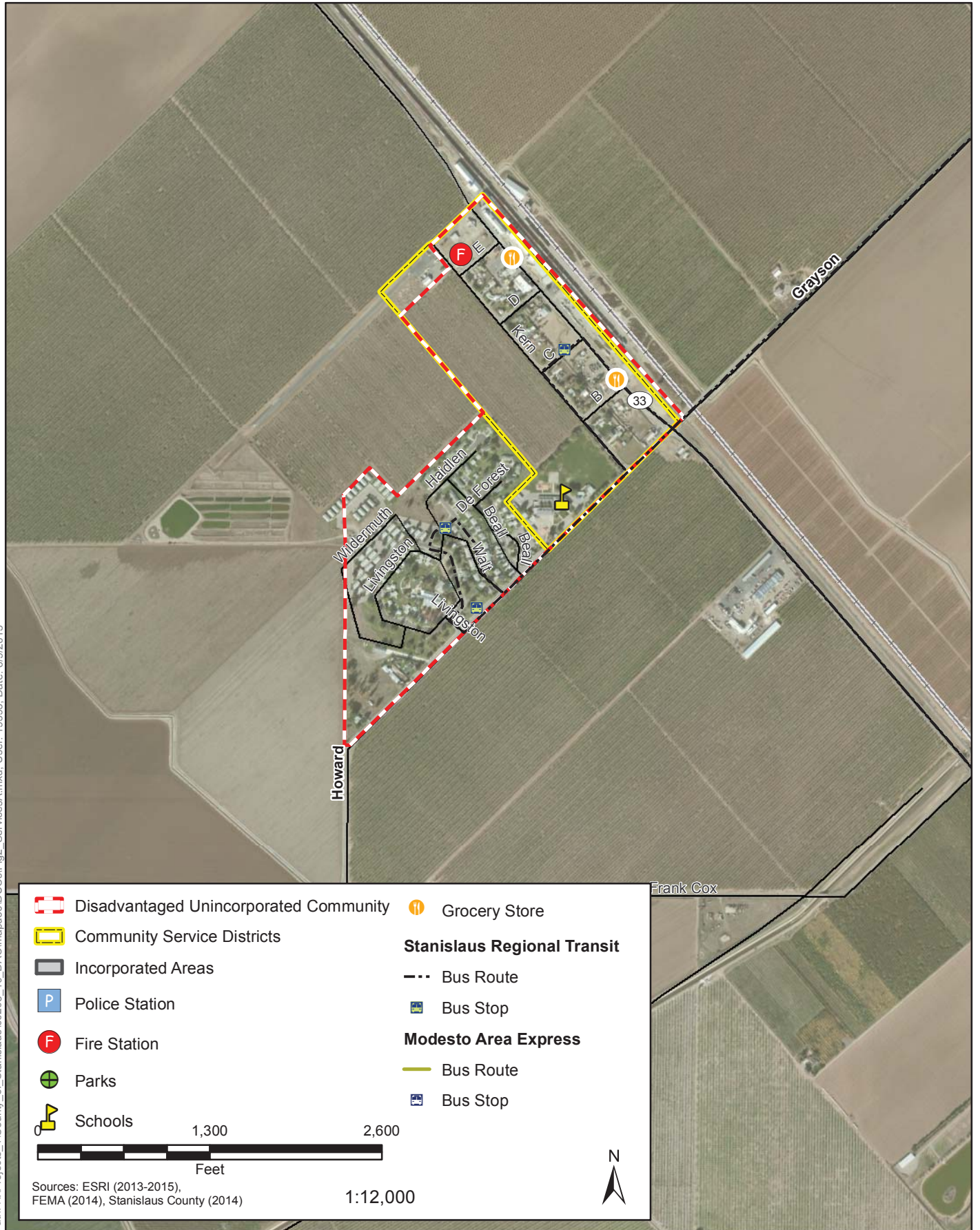
### 2.7.2 Infrastructure, Utilities, and Services

Infrastructure, utilities, and services considered for the Westley DUC are presented in Figure 2-7, *Westley Disadvantaged Unincorporated Community*, and include transportation facilities and services including roads, sidewalks, street lighting, and bus stops/service; water, wastewater, and storm drainage systems; solid waste disposal; public safety services such as law enforcement and fire protection; and access to community amenities and services such as schools, parks, and grocery stores. Data associated with chronic health conditions and air quality are described at a regional level because they are not available specifically for the Westley DUC.

### 2.7.3 Transportation Facilities and Services

Transportation infrastructure in Westley consists of public highways and roads, railroad tracks, a small private airport, and StaRT bus service. Major north-south highways serving western Stanislaus County include I-5 and Highway 33. Westley lies approximately 3 miles east of I-5. SR 33 and the Union Pacific Railroad tracks run northwest-southeast along the eastern side of Westley. SR 33 is a

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**Figure 2-7**  
**Westley Disadvantaged Unincorporated Community**

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two-lane undivided highway through Westley, with a four-way stop at its intersection with Howard Road. SR 33 is designated as a four-lane expressway by the County General Plan (Stanislaus County 2006). Expressways are intended to move high volumes of people and goods between urban areas within the county (Stanislaus County 2006). Howard Road is currently a two-lane major road designated as a four-lane expressway in the County General Plan (Stanislaus Council of Governments 2014; Stanislaus County 2006). All other roads within Westley are two-lane local roadways. No curbs, gutters, or sidewalks are present in the eastern portion of Westley; however, the streets around Grayson Charter School and the Westley Migrant Center feature sidewalks, curbs, gutters, and above-ground drainage ditches. Street lights, provided by the Westley CSD are present at several intersections, primarily along SR 33 and along Howard Road, as well as along the streets of the Westley Migrant Center. The Westley Airport, located along the northern edge of Westley, is a private airport owned by Valley Crop Dusters and used primarily by crop dusting aircraft (Great Circle Mapper 2015).

Fixed-route bus service on StaRT Route 40 connects Westley to Modesto, Grayson, and Patterson (Stanislaus Regional Transit 2014a). StaRT Route 40 provides round trips between Modesto and Patterson; Monday–Friday, there are eight round trips, running approximately every 2 hours from 5:20 a.m. to 9:08 p.m.; on Saturdays, there are five round trips, running every 2 hours and 45 minutes from 8:15 a.m. to 8:12 p.m.; no StaRT buses run on Route 40 on Sundays (Stanislaus Regional Transit 2014b). From the Modesto Downtown Transit Center, passengers can transfer to buses on Route 10 Express to Turlock; Route 15 to Ceres, Keyes, and Turlock; and Route 60 to Riverbank and Oakdale, as well as to the Modesto Amtrak station, the ACE train station in Lathrop, and the Dublin BART station (City of Modesto 2009; Stanislaus Regional Transit 2014c). From the Patterson Transfer Location at Veteran’s Memorial Park, passengers can transfer to buses on Route 45 East, which travels between Patterson and Turlock, and Route 45 West, which connects Patterson to Crows Landing, Newman, and Gustine (Stanislaus Regional Transit 2014c). Westley has three StaRT bus stops, one at C Street and SR 33, one at Howard Road and Livingston Circle, and a third at Griscott Way and Walt Avenue (Stanislaus Regional Transit 2014b).

## 2.7.4 Water, Wastewater, and Stormwater Drainage Systems

Water and wastewater services in Westley are provided by the Westley CSD and the Stanislaus County Housing Authority. The Stanislaus County Housing Authority operates a wastewater treatment facility that serves the Housing Authority’s Westley Migrant Center complex and provides sewer service to the Westley CSD on a contractual basis (Stanislaus Local Agency Formation Commission 2014). Although the CSD currently meets the needs of its customers, major repairs to the existing sewer lift station and two pumps will be necessary in the near future (Stanislaus Local Agency Formation Commission 2014). Furthermore, the two groundwater wells serving the DUC have both recently required improvements and the wastewater treatment plant is operating at capacity. The Housing Authority also provides municipal water service within the Westley CSD boundaries via two groundwater wells (Stanislaus Local Agency Formation Commission 2014). The CSD’s infrastructure is aging and in need of system-wide improvements (Stanislaus Local Agency Formation Commission 2014). Although streets within the Migrant Center complex have gutters, no gutters are present within the rest of Westley. Drainage in Westley is provided by rock wells in fair condition; no pipelines or detention ponds are present (Stanislaus County 2004).

## 2.7.5 Solid Waste Disposal

Stanislaus County contracts with four franchised solid waste collection companies, Bertolotti Disposal, Gilton Solid Waste, Modesto Disposal/Waste Management, and Turlock Scavenger, for residential and commercial garbage collection service in the unincorporated area (Stanislaus County 2014a). Westley falls within County-designated Franchise Area 1, served by Bertolotti Disposal (Stanislaus County 2014b). Besides providing solid waste and recyclables collection services to Franchise Area 1, Bertolotti Disposal operates a transfer station, open to the public Mondays through Saturdays, on Flamingo Road in Ceres. Additionally, Stanislaus County's Fink Road Sanitary Landfill, a Class III landfill for nonhazardous municipal solid waste, is operated by the County's Department of Environmental Resources and is open Monday through Saturday to private citizens, school districts, businesses, and local agencies for individual disposal of solid waste (Stanislaus County 2014c).

## 2.7.6 Law Enforcement and Fire Protection

Law enforcement services for Westley, as for the rest of unincorporated Stanislaus County and four contract cities, are provided by the Stanislaus County Sheriff's Department. The operations division of the Sheriff's Department provides law enforcement services to over 200,000 people in a 1,521-square-mile area (Stanislaus County Sheriff's Department 2014). Two units—patrol and investigations—comprise the Sheriff's Department operations division. The patrol unit responds to calls for assistance, investigates crime, makes arrests, and performs preventive patrol services (Stanislaus County Sheriff's Department 2014). The investigations unit follows up reports of major crimes, collects and prepares evidence for trials, apprehends offenders, and recovers stolen property (Stanislaus County Sheriff's Department 2014).

The nearest sheriff's station to Westley is the main station, approximately 12.5 miles east at 250 East Hackett Road in Ceres. In addition, the Patterson police station, located approximately 6 miles south of Westley in the city of Patterson, is staffed by the Stanislaus County Sheriff's Department, which provides contract police services to Patterson under the title of Patterson Police Services (Stanislaus Local Agency Formation Commission 2013).

The crime rates presented below were compiled by AGS using the primary reporting categories from the FBI 2005 – 2010 Uniform Crime Report databases along with preliminary 2011 release data and census data related to socioeconomic characteristics. The crimes are divided into two main categories, personal crimes (murder, rape, robbery, and assault) and property crimes (burglary, larceny, and motor vehicle theft). These crime rates are based on a comparison of the average local crime rate to the national average for the same crime, with a crime index of 100 considered average; scores above 100 are therefore considered greater, or worse, than average. For example, a score of 130 would represent a crime rate 30% greater than the national average for that type of crime. These crime rates are unweighted (i.e., a murder and a theft carry the same weight for calculation purposes), and are tracked at the census block group level and above, which may not correspond precisely to the DUC boundaries. Census blocks are the smallest geographic area for which the United States Census Bureau collects and tabulates data; a set of these constitutes a census block group. Census blocks vary widely in geographic size, and are generally smaller in urban areas and progressively larger in suburban, rural, or remote areas; a given block group is larger in area and population than the individual census blocks of which it is made, and generally contains between

600 and 3,000 people (United States Census Bureau 1994). The Westley DUC falls within census block group 060990033.001.

Both the overall personal crime and property crime indices for Westley are 168, which means that personal and property crimes occur at a rate 68% higher than the national average. The general and individual crime indices for these categories are shown in Table 2-25 below.

**Table 2-25. Westley Crime Indices**

| Personal Crime       |     | Property Crime       |     |
|----------------------|-----|----------------------|-----|
| Personal Crime Index | 168 | Property Crime Index | 168 |
| Murder               | 86  | Burglary             | 347 |
| Rape                 | 112 | Larceny              | 157 |
| Robbery              | 60  | Motor Vehicle Theft  | 35  |
| Assault              | 348 |                      |     |

Source: Applied Geographic Solutions and Atlas Publishing 2012.

The West Stanislaus County FPD provides fire protection, emergency, and rescue services to the community of Westley, as well as to Grayson, Crows Landing, and Diablo Grande (Emergency Services Consulting 2007). The West Stanislaus County FPD’s Fire Station No. 3 is located in Westley, at 8598 Kern Street, and houses WSF-Engine 3, WSF-Water Tender 3, and WSF-Rescue 3 (West Stanislaus County Fire Protection District 2014). District-wide, 5 full-time firefighters per shift and 100 volunteers staff the West Stanislaus County FPD; the Westley Station is staffed entirely by volunteer firefighters (Stanislaus Local Agency Formation Commission 2007; West Stanislaus County Fire Protection District 2014).

A fire department’s ability to meet the fire protection needs of its service area is typically evaluated by the Insurance Services Office (ISO), a private organization that assesses risks, including fire protection, for insurance purposes. The ISO considers a variety of factors, including a district’s fire-fighting apparatus, staffing, training, location, and water supply, to rate fire departments on a scale from 1 (best fire protection possible) to 10 (no fire protection). The ISO rating therefore reflects a fire department’s ability to protect the residents and businesses within its service area from fire. The West Stanislaus County FPD carries an ISO rating of 4 (West Stanislaus Fire Protection District 2015).

### 2.7.7 Schools and Community Amenities

Westley lies within the boundaries of the Patterson Unified School District, which includes a total of 8 schools serving 6,023 students in grades K–12 (Stanislaus County Office of Education 2009; California Department of Education 2014e). One elementary school, Grayson Charter, is located in Westley. Grayson Charter provides a dual-language immersion program in English and Spanish to 262 children in grades K–5 (California Department of Education 2014b). The nearest non-charter elementary school is Northmead Elementary, located approximately 5 miles south in Patterson. Northmead Elementary serves 572 students in grades K–5 (California Department of Education 2014c). The nearest middle school to Westley is Creekside Middle School in Patterson, serving 1,201 students in grades 6–8 (California Department of Education 2014a). The nearest high school to

Westley is Patterson High School, located approximately 6 miles southwest in Patterson and serving 1,690 students in grades 9–12 (California Department of Education 2014d).

No public parks are present in Westley; however, three are located approximately 2 miles east of Westley in the nearby community of Grayson. The three facilities in Grayson include Leroy F. Fitzsimmons Memorial Park, United Community Center and Park, and Laird Regional Park. The 0.5-acre Leroy F. Fitzsimmons Memorial Park has a basketball court, picnic shelter, tables and playground equipment (Stanislaus County n.d.). The 5-acre United Community Center and Park features a 3,165 square-foot community center building, play equipment, an amphitheater lawn area, barbecues and picnic tables, basketball courts, and informal play areas (Stanislaus County n.d.). Laird Park is a 97-acre regional park approximately 2 miles east of Grayson on the San Joaquin River. Laird Park features a baseball/softball field, a soccer field, informal play areas, picnic shelters with picnic tables and barbecues, river access, and an unpaved parking area (Stanislaus County n.d.). No restrooms are available at either Fitzsimmons or Laird Park (Stanislaus County n.d.). The Stanislaus County Department of Parks and Recreation’s Community Parks Division operates and maintains these parks. In addition, Grayson Charter School has ball fields and basketball courts. The Westley Migrant Center immediately southwest of the Westley DUC has a community center and age-separated playground equipment.

Westley has two grocery stores, El Mercadito and the Westley Market/El Paisano Supermarket, both on Highway 33. In addition, the One-Stop Market, a small convenience market with gas pumps and a laundromat, is located approximately 2 miles northeast of Westley in the community of Grayson.

## 2.7.8 Air Quality and Chronic Health Conditions

Stanislaus County is within the northern part of the eight-county SJVAPCD, a regional public health agency responsible for air quality management in those eight counties. SJVAPCD cites several factors that contribute to the valley’s air quality challenges, including high rates of chronic poverty and unemployment coupled with a high population growth rate, the presence of major transportation corridors, and topographic features such as the surrounding mountains combined with the area’s meteorological conditions (San Joaquin Valley Air Pollution Control District 2014a). SJVAPCD notes that ozone, PM10, and PM2.5 are of special concern, causing or exacerbating a variety of health conditions (San Joaquin Valley Air Pollution Control District 2014a). The presence of PM2.5, primarily a winter condition, triggers heart attacks, asthma, bronchitis, and respiratory infections, and has a strong correlation with hospital admissions and deaths (San Joaquin Valley Air Pollution Control District 2014a).

GHGs are not a criteria air pollutant and do not directly affect human health. GHG emissions are largely the result of combustion, decay and digestive processes, and emissions of industrial gases with high climate change potential. Unlike criteria pollutants such as carbon monoxide, PM10, PM2.5, and ozone, GHGs do not collect within a specific area or air basin. Their harm is done at a global level through the effect of increased concentrations of GHGs in Earth’s atmosphere.

Worldwide concern over GHG emissions is based on the climate change that they are causing by altering the way in which Earth’s atmosphere traps solar radiation as heat. The adverse effects of global climate change include rising sea levels, changes in habitat conditions for plants and animals, increased potential for wildfires, more severe weather extremes, and a reduction in California’s winter snow pack, among others. Through the impetus of AB 32 (California Global Warming

Solutions Act of 2006) and other legislation, California has undertaken a statewide program of reducing GHG emissions to 1990 levels by 2020 in order to slow the rate of global climate change.

Climate change can have an indirect effect on human health in Stanislaus County to the extent that it results in warmer summer temperatures that facilitate ozone formation and exacerbate heat-related stress among outdoor workers, the elderly, small children, and the infirm. The amount of GHGs emitted within the Westley DUC is not atypical for a small community.

SJVAPCD operates 36 air monitoring sites within its eight-county air basin. Of these, two air quality stations, one in Modesto and another in Turlock, monitor air quality within Stanislaus County. At a distance of 13 miles to the northeast, the Modesto monitoring site is the closest to Westley. Table 2-26 shows the SJVAB’s current air quality attainment status for state and federal criteria pollutants (San Joaquin Valley Air Pollution Control District 2012).

**Table 2-26. San Joaquin Valley Air Basin Air Quality Attainment Status**

| Pollutant                     | Designation/Classification         |                         |
|-------------------------------|------------------------------------|-------------------------|
|                               | Federal Standards                  | State Standards         |
| Ozone—1-hour                  | No Federal Standard <sup>a</sup>   | Nonattainment/Severe    |
| Ozone—8-hour                  | Nonattainment/Extreme <sup>b</sup> | Nonattainment           |
| PM 10                         | Attainment <sup>c</sup>            | Nonattainment           |
| PM 2.5                        | Nonattainment <sup>d</sup>         | Nonattainment           |
| Carbon monoxide               | Attainment/Unclassified            | Attainment/Unclassified |
| Nitrogen dioxide              | Attainment/Unclassified            | Attainment              |
| Sulfur dioxide                | Attainment/Unclassified            | Attainment              |
| Lead (particulate)            | No Designation/Classification      | Attainment              |
| Hydrogen sulfide              | No Federal Standard                | Unclassified            |
| Sulfates                      | No Federal Standard                | Attainment              |
| Visibility reducing particles | No Federal Standard                | Unclassified            |
| Vinyl chloride                | No Federal Standard                | Attainment              |

Source: San Joaquin Valley Air Pollution Control District 2012.

- <sup>a</sup> Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the San Joaquin Valley air basin (SJVAB) as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.
- <sup>b</sup> Though the SJVAB was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved SJVAB reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).
- <sup>c</sup> On September 25, 2008, EPA redesignated the SJVAB to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.
- <sup>d</sup> The SJVAB is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the SJVAB as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).

Over the past decade, ozone levels have been trending downward within the SJVAB and, in 2013, for the first time on record, the air basin overall had zero violations of the federal hourly ozone



standard, compared to 281 violations in 1996 (San Joaquin Valley Air Pollution Control District 2014b). At the same time, PM2.5 and PM10 levels have fluctuated with no clear upward or downward trend (California Air Resources Board 2015). Table 2-27 presents the number of days in which Stanislaus County ozone, PM2.5, and PM10 levels exceeded state and federal air quality standards in 2013 (California Air Resources Board 2015).

**Table 2-27. Stanislaus County Days in Exceedance of State and Federal Air Quality Standards, 2013**

| Monitoring Site        | Ozone                        |                                     |                              | PM 2.5                             | PM 10                           |
|------------------------|------------------------------|-------------------------------------|------------------------------|------------------------------------|---------------------------------|
|                        | # Days > State 1-Hr Standard | # Days > National '08 8-Hr Standard | # Days > State 8-Hr Standard | Est Days > National 24-Hr Standard | Est Days > State 24-Hr Standard |
| Modesto 14th St.       | 0                            | 2                                   | 13                           | 37.6                               | 57.7                            |
| Turlock S. Minaret St. | 1                            | 14                                  | 24                           | 40.3                               | 73.7                            |

Source: California Air Resources Board 2015.

The 2013 CHA, prepared by the Stanislaus County Health Services Agency, presents data about the health and well-being of Stanislaus County residents, including information on the burden of five major chronic diseases—hypertension, heart disease, stroke, diabetes and asthma—and the environmental and behavioral factors that influence their prevalence. Primary environmental factors identified in the CHA as contributing to these chronic health conditions are air quality and retail food environment; behavioral factors include diet, fast food consumption, fruit and vegetable consumption, quality of clinical care, physical activity, obesity, and tobacco use (Stanislaus County Health Services Agency 2013). As measured in 2007, Stanislaus County has the second worst retail food environment in California, with 5.48 fast-food purveyors and convenience stores for every grocery store or produce vendor near residences, compared to 4.48 statewide, and a high rate of fast food consumption in the low income population (Stanislaus County Health Services Agency 2013). The county also has the highest prevalence of obesity in the state (31.5% compared to 21.2% statewide), particularly among males, and a higher percentage of smokers than the California average (Stanislaus County Health Services Agency 2013).

The CHA presents countywide data and also divides Stanislaus County into nine geographic regions, shown in Table 2-28 below. Westley falls within the west side region identified in Table 2-28.

**Table 2-28. Community Health Assessment of Stanislaus County Geographic Regions**

| Region            | Communities  |
|-------------------|--|
| Central           | Modesto (parts) and outlying areas with ZIP codes 95350, 95355, 95357, and 95358                                   |
| East Central      | Airport Neighborhood and East Modesto (parts) with ZIP code 95354  |
| Southeast Side    | Denair, Empire, Hughson, Hickman, La Grange, Waterford with ZIP codes 95316, 95319, 95326, 95323, 95329, and 95386 |
| Northeast Side    | Knights Ferry, Valley Home, Oakdale, Riverbank with ZIP codes 95230, 95361, and 95367                              |
| North Side        | Del Rio, Salida and Modesto (parts) with ZIP codes 95356 and 95368   |
| Southwest Central | West Modesto and South Modesto with ZIP code 95351   |
| West Side         | Crows Landing, Grayson, Newman, Patterson, Westley with ZIP codes 95313, 95360, 95363, 95385, and 95387            |
| South Central     | Ceres, Keyes with ZIP codes 95307 and 95328  |
| South Side        | Turlock with ZIP codes 95380 and 95382   |

Source: Stanislaus County Health Services Agency 2013:Table 2.

Chronic health conditions of concern within Stanislaus County include hypertension, heart disease, stroke, diabetes and asthma. According to the CHA, the percentage of Stanislaus adults diagnosed with high blood pressure increased 31.2% between 2001 and 2009, and surpassed the percentage of California adults diagnosed with high blood pressure use. As of 2009, approximately 30.7% of Stanislaus County adults were diagnosed with hypertension, compared to 26.2% statewide. Among Stanislaus County’s nine regions, the west side, including Westley, has the lowest rate of hypertension-related emergency room visits, ranks fifth for hypertension-related hospitalizations, and has the second-lowest hypertension-related mortality rate (Stanislaus County Health Services Agency 2013).

The CHA notes that in 2009, 5% of Stanislaus County adults had been diagnosed with heart disease, compared to 5.9% statewide and 12% of adults nationwide. Stanislaus County’s west side has the second-lowest rate among the nine regions for heart disease–related emergency room visits, the lowest rate of heart disease–related hospitalizations, and the fourth-highest mortality rate among the county’s nine regions (Stanislaus County Health Services Agency 2013).

The CHA indicates that the California Health Interview Survey, on which it relies for some data, has not consistently tracked either the overall prevalence of cancer or the rates of individual types of cancer; data for cancer rates is therefore less current than for other, more closely tracked, conditions. Although the percentage of Stanislaus County adults diagnosed with cancer has increased from 7.4% in 2001 to 8.5% in 2005, it remains lower than the statewide rate. However, at a rate of approximately 21.4% of all deaths annually, cancer is the second most common cause of death in Stanislaus County. The west side of Stanislaus County ranks seventh (third-lowest) among the nine regions for cancer-related emergency room visits, has the lowest rate of cancer-related hospitalizations, and has the highest rate of cancer-related mortality (Stanislaus County Health Services Agency 2013).

Diabetes, according to the CHA, affects 8.3% of the United States population and is the seventh leading cause of death nationwide. Within California, from 2001-2007, the percentage of people diagnosed with diabetes increased from 6.2% to 8.5%, a 37% increase. Trends in Stanislaus County

are consistent with the statewide increase; in 2009, 7.6% of adults in Stanislaus County had been diagnosed with diabetes. While the prevalence of diabetes was lower in Stanislaus County than California, in 2011, Stanislaus County had higher hospitalization rates than California for four primary indicators of diabetes management, including hospitalization for short-term complications, long-term complications, lower-extremity amputation, and uncontrolled diabetes (Stanislaus County Health Services Agency 2013). Among Stanislaus County's nine regions, the west side has the lowest rate of diabetes-related emergency room visits, the third-lowest rate of hospitalizations, and the highest rate of diabetes-related mortality (Stanislaus County Health Services Agency 2013).

According to the CHA, in 2009 the percentage of Stanislaus County adults diagnosed with asthma was 21.8%, compared to 13.5% of the adult population statewide. The west side region has Stanislaus County's second-lowest rate of asthma-related emergency room visits and hospitalizations among the nine regions (Stanislaus County Health Services Agency 2013). Due to the low asthma-related death rate, the CHA does not track or rank asthma-related mortality.

The CHA also uses LEB as a measure of quality of life within Stanislaus County and each of its nine regions. LEB is defined as the number of years a newborn infant is projected to live if mortality patterns at the time of its birth were to remain the same throughout its life. The LEB for Stanislaus County is calculated to be 77.2 years, 1.7 years less than the nationwide LEB of 78.9. The LEBs within the nine Stanislaus County regions range from a high of 80.27 years to a low of 75.01 years; the west side region ranks third-highest among these, with a LEB of 79.58 years (Stanislaus County Health Services Agency 2013).

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## Chapter 3

# Community Needs Assessment

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The following discusses the needs of Stanislaus County's seven DUCs.

### 3.1 Cowan Tract DUC

The Cowan Tract DUC lacks curbs, gutters, sidewalks, streetlights, and a storm drainage system. Water is supplied through individual private wells and wastewater is disposed through private septic systems. These could be provided by a CSD; however, no such district exists in this DUC. Funding of improvements from benefit assessments or other property-based revenue sources would be problematic in Cowan Tract given its low median income.

### 3.2 Crows Landing DUC

Most of the Crows Landing DUC lacks curbs, gutters, sidewalks, and streetlights. There is no storm drainage system. Wastewater in Crows Landing is processed through individual private septic systems. The existing water supply system, although in the process of being upgraded, relies on an aging system of pipelines that does not provide adequate water pressure during periods of peak demand. Although the Crows Landing CSD was recently granted up to \$20,000 from the Stanislaus County Community Development Fund to assist in the repair of a corroded well, the CSD has limited financial resources to address existing water supply system deficiencies. Funding of improvements from benefit assessments or other property-based revenue sources would be problematic in Cowan Tract given its low median income.

### 3.3 Grayson DUC

This DUC has adequate infrastructure and services, with the exception of the water supply system. Specific water supply system deficiencies include the pumping capacity of the two wells and areas of the distribution system in which minimum water pressure could not be maintained. Funding of improvements from benefit assessments or other property-based revenue sources would be problematic in Grayson DUC given its low median income. Further, the City of Modesto applied unsuccessfully, in 2014, to the California Department of Water Resources for an Expedited Drought Grant to implement the needed improvements.

### 3.4 Keyes DUC

Curbs, gutters, sidewalks, and streetlights are absent in small portions of the Keyes DUC. Areas outside the Keyes CSD, including two mobile home parks, are not served by public water, sewer, or storm drainage systems. Funding of improvements from benefit assessments or other property-based revenue sources would be problematic in the Keyes DUC given its low median income.

### 3.5 Monterey Park Tract DUC

No sidewalks, curbs, or gutters exist within Monterey Park Tract DUC, and there is no storm drainage system. The Monterey Park Tract CSD provides the DUC with domestic water from two groundwater wells and, due to a history of poor water quality and continuing contamination, is in the process of constructing a new water delivery system that will utilize water from the City of Ceres. Wastewater is disposed through private septic systems. In addition, portions of the DUC are without street lights. Monterey Park Tract lacks public bus service. Funding of improvements from benefit assessments or other property-based revenue sources would be problematic in Monterey Park Tract given its low median income and lack of a CSD.

### 3.6 Riverdale Park Tract DUC

There are no curbs, gutters, sidewalks, or streetlights in this DUC. The Riverdale Park Tract CSD serves only the northern portion of the Riverdale Park Tract CDP that is within the sphere of influence of the City of Modesto. As a result, the DUC has no CSD and relies on private wells and private septic systems. Further, there is no storm drainage system. Most of the Riverdale Park Tract DUC also lacks public bus service.

At the present time, the nearby Riverdale Park Tract CSD appears to have limited financial resources to operate the domestic water system within its territory. The potential to expand the CSD to cover the DUC is limited in that future funding of improvements from benefit assessments or other property-based revenue sources would be problematic in the Riverdale Park Tract DUC given its low median income.

### 3.7 Westley DUC

Curbs, gutters, sidewalks, and streetlights are absent in portions of the Westley DUC. There is no storm drainage system. The Westley CSD contracts with the Stanislaus County Housing Authority for water and wastewater services; the Stanislaus County Housing Authority also serves the area outside the Westley CSD. Although the CSD currently meets the needs of its customers, major repairs to the existing sewer lift station and two pumps will be necessary in the near future. Furthermore, the two groundwater wells serving the DUC have both recently required improvements and the wastewater treatment plant is operating at capacity. The CSD's infrastructure is aging and in need of system-wide improvements (Stanislaus Local Agency Formation Commission 2014). Funding of improvements from benefit assessments or other property-based revenue sources would be problematic in the Westley DUC given its low median income.

## Chapter 4

# Healthy Communities Strategies

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In general, the Stanislaus County DUCs lack certain community infrastructure, water and sewer service, and access to transit and full-service grocery stores. As described in Chapter 2, Existing Conditions, the Stanislaus County Health Services Agency’s 2013 *Community Health Assessment of Stanislaus County* (CHA) indicates a correlation between poor infrastructure, particularly accessibility, and an unhealthy population. The CHA notes that Stanislaus County has the second worst retail food environment in California, a high rate of fast food consumption in the low income population, the highest prevalence of obesity in the state, and a higher percentage of smokers (Stanislaus County Health Services Agency 2013). The CHA identifies air quality and retail food environment (access to healthy food) as primary environmental factors contributing to several chronic health conditions prevalent in Stanislaus County, including hypertension, heart disease, stroke, diabetes, and asthma (Stanislaus County Health Services Agency 2013).

Infrastructure improvements and other strategies to address these issues will improve conditions within the DUCs over the long term.

The proposed General Plan update includes the following policies and implementation measures as strategies to address DUC deficits.

## 4.1 Land Use Element

**POLICY SIX:** Preserve and encourage upgrading of existing unincorporated urban communities. [existing policy]

IMPLEMENTATION MEASURE 1: The County shall support State efforts to reestablish redevelopment tools utilizing tax increment for the purpose of upgrading existing unincorporated communities. [amended measure]

IMPLEMENTATION MEASURE 2: The County will apply for federal and state funds to aid in upgrading existing urban areas. [existing measure]

IMPLEMENTATION MEASURE 4: When feasible, new development shall be designed and built to allow for the upgrading or expansion of services necessary to upgrade existing unincorporated urban communities; however, new development will not be expected to be financially responsible for providing upgrades. [new measure]

IMPLEMENTATION MEASURE 5: The County shall support and assist unincorporated urban communities in their efforts to establish “self-help” programs (such as assessment financing districts) necessary to upgrade their communities. [new measure]

IMPLEMENTATION MEASURE 6: As part of the environmental work the County will review, and if necessary, amend the General Plan to address the infrastructure, housing and public health needs to assist in transforming identified disadvantaged communities into healthy communities. [new measure]

**POLICY TWENTY-THREE:** Future growth shall not exceed the capabilities/capacity of the provider of services such as sewer, water, public safety, solid waste management, road systems, schools, health care facilities, etc. [existing policy]

IMPLEMENTATION MEASURE 6: Rezoning of property prior to: 1) annexation to a special district; 2) inclusion of such property into a newly formed special district, or community service district shall be approved only if the development is adequately conditioned to restrict development from occurring until annexation to or formation of the required district is complete. [amended policy]

**POLICY THIRTY:** The County shall support efforts to improve local health care options through the siting of new facilities in locations with the infrastructure (including, but not limited to, transportation and utility) to support both facility and client needs. [new policy]

## 4.2 Circulation Element

**POLICY EIGHT:** Promote public transit as a viable transportation source. [Existing policy]

IMPLEMENTATION MEASURE 1: Continue to operate existing transit systems and coordinate with other County transit operators to provide public transit serving Stanislaus County. [amended policy]

IMPLEMENTATION MEASURE 6: Where possible, coordinate public transportation with land use planning, transportation planning, and air quality policies such that transit investments are complementary to land use planning and air quality policies. [new policy]

IMPLEMENTATION MEASURE 9: The County shall encourage infill development of vacant parcels and redevelopment projects that will align with and improve the overall effectiveness of the public transit system. [new policy]

## 4.3 Additional Policies

Although deficits are identified in Chapter 3, improvements to existing infrastructure are either in process, under the jurisdiction of the appropriate CSDs, or are not viable due to location, funding, and other constraints. In some cases, the locations of DUCs preclude connections to existing municipal water and wastewater services; in nearly all cases, the cost of providing such services to these locations is prohibitive. As identified in the Municipal Service Reviews for the relevant CSAs and CSDs, funding opportunities for infrastructure improvements in the DUCs are limited because of the low assessed values of the properties within the DUCs. The low values would not support sufficient benefit assessments or special taxes to finance the needed improvements and continued maintenance and operation of infrastructure. The existing and proposed amended General Plan policies and implementation measures outlined above adequately address the needs of the identified DUCs to the extent that improvements are viable, and no additional policies or implementation measures are necessary.



## Chapter 2Two

# CIRCULATION ELEMENT

## INTRODUCTION

An efficient, integrated transportation system is essential to maintaining the quality of life and facilitating the economic growth of the County of Stanislaus. Over the past few decades, the County has been able to sustain its growth without extensive expansion of County roadways and State Highways because sufficient capacity has been available on the existing system to absorb the traffic generated by new growth. However, ~~over the past few years,~~ the rate of traffic growth in the County has started to exceed the available transportation system capacity in some areas of the County, particularly in and around the more urbanized areas. In addition, ~~approximately~~ ~~roughly~~ one-fifth of the workers living in Stanislaus County commute to jobs outside the county each day placing greater demand on freeways, county roadways and bridges that provide access to adjacent counties.

~~Since 1970~~ ~~From 1990 to 2000, the annual rate of growth of the total population of Stanislaus County saw substantial population growth, increasing 20.6 percent from 370,522 to 446,997. From 2000 to 2010 that population growth rate slowed significantly, increasing only 15.1 percent from 446,997 to 514,453 has ranged from 2.2% to 4.4% (U.S. Census Bureau StanCOG spreadsheet, 201404).~~ Although some growth has been in unincorporated ~~communities~~ ~~towns~~, most of this growth has occurred within the incorporated cities of Stanislaus County. Consequently, the County must plan for new urban and rural roadways to be built as part of development proposals and expansion of existing roadways to connect major traffic generators (i.e., incorporated cities). These roadways will facilitate inter-city traffic movement between the cities and between neighboring counties.

Goods movement will also increase with an expanded population and economic base. The large urbanized areas require millions of tons of goods each year to maintain their economic activities. Transport of agricultural commodities has long been an important function in the Stanislaus County area. Stanislaus County is an important food processing region for the State, nation and the world. Poultry, dairy, **tree nuts**, and vegetable products are processed and distributed throughout the world from here every day. Goods movement is the result of production activities within and outside of the region, ~~and where~~ movement takes place within a complex system of routes, modes, terminals, and warehouse facilities.

Stanislaus County is principally an agricultural region which produces and specializes in a number of products. Nearly 80% of the County's land is devoted to agricultural production, compared to 25% in the State as a whole (California Department of Conservation, 2002; Department of Finance). However, in the case of Stanislaus County, when raw materials are bulky, perishable, and of relatively low value, it is natural that processing will occur nearest to the place where the raw material is produced, not only to reduce the bulk, but to raise the value in order to be able to sustain transportation costs. With agricultural processing occurring throughout the County, in many of its ~~communities~~ ~~towns~~ and in the cities, transportation and circulation are key factors in determining the health of the County's economy.

The State has also recognized the importance of the agricultural goods movement in Central Valley areas such as Stanislaus County. The State's Goods Movement Action Plan identifies four high priority gateway regions in California that are necessary to support the continued growth of the California economy. **One of these high priority regions is** ~~the~~ the Central Valley region, which includes Route 99, ~~and~~ Interstate 5, **the Union Pacific Railroad**, and other important east-west corridors, **which are all major international trade routes** that traverse Stanislaus County, ~~is one of~~

~~these high priority regions.~~ Traffic congestion and operational conflicts between trucks and passenger vehicles have been identified as key issues that need to be addressed to maintain an efficient goods movement network in the Central Valley.

Agriculture and manufacturing depend on an efficient, rapid, and economical transportation system to move supplies and final products. Continued allocation, improvement, and maintenance programs will ensure a circulation system vital to the County's economy.

## PURPOSE

The Circulation Element of the General Plan identifies goals, policies and implementation measures that ensure compatibility between land use, infrastructure and transportation modes. ~~The information gathered that gives rise to this element is provided in Chapter 2 of the "Stanislaus County General Plan — Support Documentation."~~ The Circulation Element ~~also of the County General Plan~~ depicts corridors for public mobility and access which are planned to meet the needs of the existing and anticipated population of Stanislaus County. The adoption of this Circulation Element by the Board of Supervisors of Stanislaus County complies with California Government Code Section 65302(b), which requires each county and city to prepare, as part of their general plan, a circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use element of the plan.

The Stanislaus County Circulation Element serves to: (1) provide a system of roadways throughout the County which reflects land use needs; and (2) support a broad range of transportation modes. Development of these facilities is based on the needs generated by future land use and represents the anticipated needs of each area when fully developed to the uses and densities proposed by the General Plan. Increased demand for circulation facilities is based on the need of an increased number of people to move about and the increased need to move goods from place to place.

Stanislaus County maintains more than 1,500 miles of roadways within the unincorporated area (~~Stanislaus County Public Works, 2004~~). These roadways provide access to individual parcels and serve as major corridors between urban areas. The mobility of those without automobiles is effectively restrained and, as the population grows; increased traffic could adversely affect air quality. The lower the residential density, the less likely that public transit systems can be supported. This element recognizes that the auto is and will be in the future the overwhelming transportation choice for most of the populace. This element also incorporates strategies intended to encourage land uses that support public transit and other transportation modes that will contribute to improved air quality in the future.

## Consistency with the Regional Transportation Plans and Local General Plans

Efficient transportation systems cannot be created without forging effective linkages between the internal transportation network (which is the responsibility of the County and the cities) and the external transportation network (which is the responsibility of other local, State and federal entities). By incorporating policies, standards, and implementation measures to ensure consistency with the external systems, the County can play an important role in building a regional transportation system that provides seamless integration between internal and external systems thereby facilitating the movement of both people and goods. This element incorporates recommendations from each of the cities' general plans, the Caltrans Transportation Corridor Reports, and the Regional Transportation Plan developed by the Stanislaus Council of Governments (StanCOG) to develop the specific recommendations contained in this chapter. The final recommendations of this chapter have been extensively reviewed by each jurisdiction, Caltrans, and StanCOG for consistency and compatibility.

## Level of Service







Level of service (LOS) is a standard measure of traffic service along a roadway or at an intersection **for vehicles**. It ranges from A to F, with LOS A being best and LOS F being worst. ~~Figure 2-1 provides illustrations of Level of Service conditions for two types of roadway situations commonly found in Stanislaus County (i.e., two-lane highways and unsignalized intersections at four-way stops).~~ In very general terms, LOS A, B and C indicate conditions where traffic can move relatively freely. LOS D describes conditions where delay is more noticeable and average travel speeds are more unstable. LOS E indicates significant delays and average travel speeds vary greatly and are unpredictable; traffic volumes are generally at or close to capacity. Finally, LOS F characterizes traffic flow at very slow speeds (stop-and-go) and significant delays with queuing at ~~unsignalized~~ intersections; in effect, traffic demand on the roadway exceeds the roadway's capacity. As a matter of policy, Stanislaus County strives to maintain LOS ~~C-D~~ or better **for motorized vehicles** on all roadway ~~segments and a LOS of C or better for motorized vehicles at all roadway intersections~~. When measuring levels of service, Stanislaus County uses the criteria established in the Highway Capacity Manual published and updated by the Transportation Research Board. **The LOS criteria for roadway segments are depicted in Table II-1.**

## Traffic Analysis

To confirm the need for transportation improvements identified in the Circulation Element, a forecast of traffic volumes and Level of Service is prepared based upon the level of growth anticipated by the year ~~2030~~ **2035**, the planning horizon for the General Plan. The forecast is based on the latest population, housing and employment projections prepared by StanCOG, the agency designated by the State to prepare these forecasts. These forecasts were adjusted to reflect additional growth anticipated by the cities or the County since the adoption of the StanCOG forecast. **A traffic analysis, incorporating the forecasts, was prepared as part of the environmental review for the adoption of this Circulation Element and** ~~The traffic study is provided in Chapter 2 of the "Stanislaus County General Plan – Support Documentation" and~~ its recommendations have been incorporated ~~into this element~~.







Figure 2-1 Level of Service

## LEVELS OF SERVICE for Two-Lane Highways

| Level of Service | Flow Conditions   | Operating Speed (mph) | Technical Descriptions   |
|------------------|---|-----------------------|--|
| <b>A</b>         |    | 55+                   | Highest quality of service. Free traffic flow with few restrictions on maneuverability or speed.<br><b>No delays</b> |
| <b>B</b>         |    | 50                    | Stable traffic flow. Speed becoming slightly restricted. Low restriction on maneuverability.<br><b>No delays</b>     |
| <b>C</b>         |    | 45                    | Stable traffic flow, but less freedom to select speed, change lanes or pass.<br><b>Minimal delays</b>                |
| <b>D</b>         |    | 40                    | Traffic flow becoming unstable. Speeds subject to sudden change. Passing is difficult.<br><b>Minimal delays</b>      |
| <b>E</b>         |  | 35                    | Unstable traffic flow. Speeds change quickly and maneuverability is low.<br><b>Significant delays</b>                |
| <b>F</b>         |  |                       | Heavily congested traffic. Demand exceeds capacity and speeds vary greatly.<br><b>Considerable delays</b>            |

Source: 2000 HCM, Exhibit 20-2, LOS Criteria for Two-Lane Highways In Class 1

## LEVELS OF SERVICE Unsignalized Intersections Four Way Stop

| Level of Service | Flow Conditions   | Delay per Vehicle (seconds) | Technical Descriptions     |
|------------------|---|-----------------------------|----------------------------|
| <b>A</b>         |    | < 10                        | <b>Very short delays</b>   |
| <b>B</b>         |    | 10-15                       | <b>Short delays</b>        |
| <b>C</b>         |    | 16-25                       | <b>Minimal delays</b>      |
| <b>D</b>         |    | 26-35                       | <b>Minimal delays</b>      |
| <b>E</b>         |  | 36-50                       | <b>Significant delays</b>  |
| <b>F</b>         |  | > 50                        | <b>Considerable delays</b> |

Source: 2000 HCM, Exhibit 17-22, Level of Service Criteria for AW/SC Intersections

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## STREETS AND ROADS

### Roadway Classifications

A hierarchy of adequately sized roadsways will be required to provide access to facilitate the movement of people and goods throughout the County, provide access to future development within the unincorporated area and between cities, and maintain acceptable levels of service. The General Plan Circulation Diagram depicted in Figure II-1 2-2 identifies the functional classification of key routesroadways and distinguishes between existing and proposed future roads. **The typical right-of-way required for each roadway classification is depicted in Table II-3.** The classifications, as well as their required design and access standards, are defined in the following index of road classifications. ~~(State Highways, and sSpecial~~ circumstances and exceptions to these standards, are **also** noted. ~~in italics~~):

- A. **Interstate Freeway.** The function of an **Interstate** Freeway is to provide for the safe and efficient movement of large volumes of interregional, inter-city, and urban traffic at high-speeds. **Interstate** Freeways have no direct land service function. Access is restricted to roadways via interchanges, and typically to Expressways and Majors **at minimum of 2-mile spacing along the mainline.** ~~Parking is not permitted on freeways.~~ **Interstate** Freeways in Stanislaus County are ~~typically~~ planned, constructed, and operated by Caltrans **and are legislatively defined by the United States Congress under the Dwight D. Eisenhower National System of Interstate and Defense Highways.** **Parking, pedestrians, non-motorized vehicles and farm machinery are not allowed on these types of highways.**

~~Interstate 5 and State Route 99 are is the only Interstate Freeways that traverses Stanislaus County. Caltrans has prepared a feasibility study to expand State Route 99 to eight lanes through the county.~~

**Interstate Freeways are designated on the Circulation Diagram by the “Interstate/Expressway” roadway classification.** Right-of-way and building setback requirements for th~~isese~~ facility~~ies are~~ **shall be** determined by Caltrans.

- B. **Freeways and Expressways.** Designed exclusively for high-speed and unhindered vehicular traffic, with no traffic signals, intersections, or property access, these highways are free of any at-grade crossings with other roadways or railroads, which instead use overpasses and underpasses to cross the highway. Entrance and exit to the highway is provided by ramps at interchanges. Opposing directions of travel are usually (but not always) separated by a median or some sort of traffic barrier. Generally, pedestrians, non-motorized vehicles and farm machinery are not allowed on these types of highways, although some exceptions do exist in certain areas.

**State Route 99, North County Transportation Corridor and State Route 132 are the only example of this highway type in Stanislaus County.** Caltrans has prepared a feasibility study to expand State Route 99 to eight lanes through the County. North County Transportation Corridor, running from Highway 99 north of Modesto to Highway 120 east of Oakdale, and the realignment of State Route 132, from Highway 99 to Dakota Avenue, are planned to be Expressways.

**Freeways and Expressways are also designated on the Circulation Diagram by the “Interstate/Expressway” roadway classification. Right-of-way and building setback requirements for these facilities are determined by Caltrans.**

**C.B Principal Arterials (Rural and Urban) Expressway.** The function of an ~~Expressway~~ **Principal Arterial** is to move high volumes of people and goods between urban areas within the county at higher speeds, **while still providing access to abutting properties as permitted by the standards for each Principal Arterial class.** ~~depending upon the level of access control. Direct access to abutting property is specified within the standard for each expressway class.~~ **Expressways-Principal Arterials** serve a similar function to that of **Freeways and Expressways** (the fast and safe movement of people and goods within the county) and provide access to the interregional freeway system. On-street parking is not permitted on ~~Expressways-Principal Arterials~~ **except under very special and rare circumstances where the Department of Public Works has determined that traffic flow and safety conditions allow on-street parking.** The design features of ~~Expressways-Principal Arterials~~ **are determined by the level of access control and the number of lanes designated for each Expressways-Principal Arterial route segment (see Figure 2-3).** **Pedestrian and bicycle facilities may be provided on these types of roadways. Farm machinery is permitted on these types of roadways. The number of lanes that are required will be determined at project build time for the 20-year design life of the roadway. The access restrictions of Principal Arterials are defined as:**

~~(1) — A “Class A” Expressway is a fully access-controlled road with grade separated interchanges at intervals of approximately one mile at other Expressway, Major, or Local roads. The typical right of way is 110 or 135 feet (4 or 6 lanes, respectively).~~

~~State Route 120 (Oakdale Bypass from Valley Home Rd. to its eastern junction at State Route 108) is planned to be a Class A Expressway within the right-of-way planned and approved by Caltrans.~~

~~(1)(2) A “Class B” Expressway is a P~~ **partially access-controlled Principal Arterial roadways (See Figure II-2 – Arterial Access Designation), with are** traffic-controlled intersections at **Principal and Minor Arterials** ~~Major roads and other Expressways.~~ Collectors and Locals are permitted right-in, right-out access only at 1/4- to 1/2-mile intervals. ~~The typical right-of-way is 110 or 135 feet (4 or 6 lanes, respectively). On limited rights-of-way, Class B Expressways may be 100 feet for four lanes and 124 for six lanes.~~

~~State Route 219 (Kiernan Avenue between State Route 99 and State Route 108 (McHenry Blvd.) is planned to be a Class B Expressway. Caltrans has adopted an Official Plan Line for construction of the ultimate 6-lane facility.~~

~~State Route 132 from State Route 99 west to the San Joaquin County line is planned to be constructed along a new alignment as a Class B Expressway unless otherwise determined by Caltrans. Caltrans has adopted Project Study Reports for construction of the interim facilities.~~

~~(2)(3) A “Class C” Expressway is a L~~ **imited access-controlled Principal Arterial roadways; (See Figure II-2 – Arterial Access Designation), with are** traffic-controlled intersections at ~~Majors and other~~ **Expressways and Principal or Minor**

**Arterials.** Intersections at Collectors and Locals may or may not be controlled by a traffic signal. ~~The typical right-of-way is 110 or 135 feet (4 or 6 lanes, respectively). On limited rights-of-way, Class C Expressways may be 100 feet for four lanes and 124 for six lanes.~~

Some State Highways that lie in the unincorporated area outside the spheres of influence of the cities and the community of La Grange (State Routes 4, 33, 120 ~~except the Oakdale Bypass,~~ and 132 along its existing Maze Blvd. alignment and east of Modesto) are planned to be **Limited Access Principal Arterials** ~~Class C Expressways,~~ unless otherwise determined by Caltrans.

Santa Fe Avenue, outside of the communities of Empire and Denair, and the City of Hughson, is planned to be a 4-lane **Limited Access Principal Arterial** ~~Class C Expressway~~ within an 85-foot right-of-way measured from the railroad right-of-way.

**Hatch Road from Mitchell Road to Geer Road is planned to be a 4-lane Limited Access Principal Arterial within a 100-foot limited right of way due to the Ceres Main Canal restrictions.**

**Principal Arterials (Rural & Urban) are designated on the Circulation Diagram by the “Other Principal Arterial”, or “OPA”, roadway classification.**

**DC. Minor Arterial (Rural & Urban) Major.** The function of a ~~Major road~~ **Minor Arterial** is to carry moderate- to high-volume traffic to and from collectors to other ~~Majors~~ **Minor Arterials, Principal Arterials, Expressways, and Freeways** with a secondary function of land access. ~~Majors~~ **Minor Arterials** located within areas zoned for heavy or light industrial or that are expected to carry large or heavy trucks shall be constructed to Industrial Major **Collector** standards. Limited direct access is provided to abutting property. On-street parking will be permitted only where ~~the Department of~~ Public Works has determined that traffic flow and safety conditions allow on-street parking. **Pedestrian and bicycle facilities may be provided on these types of roadways. Farm machinery is permitted on these types of highways.** ~~The typical right-of-way is 110 feet (up to 6 lanes, ultimately). There are different design standards associated with the Urban and Rural Minor Arterial classifications, as depicted in Table II-3. On limited rights-of-way, Majors may be 100 feet.~~

State Routes ~~108 and~~ 165 from State Route 99 to the Merced County line ~~is are~~ planned to be **a Minor Arterial** ~~Majors and State Route 33 within the cities of Patterson and Newman is planned to be an 80-foot Major,~~ **unless otherwise determined by Caltrans.**

**State Route 33 within the cities of Patterson and Newman is planned to be an 80-foot Minor Arterial, unless otherwise determined by Caltrans.**

Santa Fe Avenue, within the communities of Empire and Denair, and within the City of Hughson, is planned to be an 85-foot **Minor Arterial** ~~Major~~ measured from the railroad right-of-way.

**Minor Arterials (Rural & Urban) are designated on the Circulation Diagram by the “Minor Arterial”, or “MA”, roadway classification.**

~~ED.~~ **Major Collector (Rural, Urban & Industrial).** Major Collectors serve a dual function by providing ~~both~~ access to abutting property and movement of moderate volumes of people and goods for medium length trips **in rural, urban, and industrial zones.** Major Collectors serve as transition facilities, carrying traffic from lower to higher level roadways. Most Major Collectors are two-lane roadways ~~with a typical right-of-way of 60 feet., but may be up to four-lane facilities where traffic dictates it to be necessary.~~ On-street parking will be permitted only where the Department of Public Works has determined that traffic flow and safety conditions allow on-street parking. **Pedestrian and bicycle facilities may be provided on these types of roadways. Farm machinery is permitted on these types of highways. The typical right-of-way for Rural and Urban Major Collectors is 80 feet (2 lanes). However, there are different design standards associated with the Urban and Rural Minor Collector classifications, as depicted in Table II-3. Within industrial zones, a 110-foot right-of-way shall be the standard for the Major Collectors. The Industrial Major Collectors serve as transition facilities carrying traffic from lower to higher level roadways.**

~~In urban residential subdivisions, roads not shown on the General Plan Circulation Diagram or as an Official Plan Line that will serve more than 50 dwelling units, when the maximum density and full extent of the development is considered, shall be deemed Collectors. In some instances, the Department of Public Works may determine that project design features dictate that a road serving as few as 20 urban dwelling units be deemed a Collector. Under certain circumstances, 80 feet of right-of-way may be required to provide additional capacity to provide two additional through lanes to accommodate projected traffic demand, to facilitate the movement of large trucks, or to improve safety due to limited visibility or other safety hazards. Table 2-1 lists the 80-foot Collectors.~~

**Major Collectors (Rural, Urban and Industrial) are designated on the Circulation Diagram by the “Major Collector”, or “MJC”, roadway classification.**

~~FE.~~ **Minor Collector (Rural, Urban, & Industrial).** Minor Collectors serve a dual function by providing access to abutting properties and movement of light to moderate volumes of people and goods for medium length trips. Pedestrian and bicycle facilities may be provided on these types of roadways. Farm machinery is permitted on these types of highways.

**The typical right-of-way for Rural and Urban Minor Collectors is 60 feet (2 lanes). However, there are different design standards associated with the Urban and a Rural Minor Collector classifications, as depicted in Table II-3. Under certain circumstances, 80 feet of right-of-way may be required for Rural Minor Collectors to provide additional capacity due to non-ideal environments. Table II-2 lists the roadways requiring 80 foot right-of-ways. Within industrial zones, a 70-ft right-of-way is required to allow for the movement of goods while still providing local access to abutting properties. This is the minimum size for roadways located within unincorporated County industrial zones.**

**Minor Collectors (Rural, Urban and Industrial) are designated on the Circulation Diagram by the “Minor Collector”, or “MC”, roadway classification.**

~~GE.~~ **Rural Local.** Rural Local roadways serve as land access facilities in the agricultural areas of the County by providing ~~both~~ direct access to abutting property and movement of small

volumes of people and goods for medium length trips. **Rural Local roadways** are two-lane roadways with a typical right-of-way of 60 feet ~~to that~~ safely accommodates drainage, utilities, and other physical improvements that may be located within the public right-of-way. In agricultural areas of the county, roadways not shown on the General Plan Circulation Diagram or as an Official Plan Line shall be considered **Rural Local**. This classification also includes cul-de-sac and dead-end roadways in agricultural areas of the county. **Pedestrian and bicycle facilities may be provided on these types of roadways. Farm machinery is permitted on these types of highways.**

**The typical right-of-way for Rural Local Roadways is 60 feet (2 lanes). Under certain circumstances, 80 feet of right-of-way may be required for Rural Local roadways to provide additional capacity due to non-ideal environments. Table II-2 lists the roadways requiring 80 foot right-of-ways.**

**Rural Locals are designated on the Circulation Diagram by the “Local” roadway classification.**

**HF.** ~~Minor Urban Local.~~ **Minor Urban Local** roadways serve as land access facilities in the urban and industrial areas of the County by providing **both direct** access to abutting property and movement of small volumes of people and goods for short trips. In urban subdivisions, roadways not shown on the General Plan Circulation Diagram or as an Official Plan Line, ~~which will serve no more than 50 dwelling units, when the neighborhood is fully developed,~~ shall be deemed ~~Minors~~ **Urban Local roadways** unless otherwise designated by the Department of Public Works. ~~Minors~~ **Urban Local** roadways are two-lane roadways with a **typical right of way of 50 feet (2 lanes), with a typical right-of-way of 50 feet.** ~~Minors located~~ **W**ithin areas zoned for heavy or light industrial or which are expected to carry large or heavy trucks, **the Minor Collector standard shall have be constructed to Industrial Minor standards with** a typical right-of-way of 70 feet. This classification also includes cul-de-sac and dead-end roadways in urban and industrial areas of the County. **Pedestrian and bicycle facilities may be provided on these types of roadways. Farm machinery is permitted on these types of roadways.**

**Urban Locals are designated on the Circulation Diagram by the “Local” roadway classification.**

**IG.** **Private.** Private roadways serve as land access facilities and are not maintained by the County. Two types of Private roadways are permitted in the County. These roadways are generally not shown on the General Plan Circulation Diagram.

Agricultural access easements, providing access to parcels 20 acres or more, are included primarily to conform to state-mandated standards for private access roadways in the State Responsibility Area as designated by the California Department of Forestry and Fire Protection. New roadways under this category shall not exceed a 12% slope nor be less than 30 feet in width.

Private roadways may also be approved by the Planning Commission or Board of Supervisors as an exception to the Subdivision Ordinance to provide access to parcels in an urban or planned development when it is determined that such a request serves a public purpose and that future divisions of land requiring road access to or through the development would not occur due to topographic features, physical barriers, existing



development, and other physical constraints of the development and the adjacent lands. If approved, these roadways shall be constructed to the same standards as County-maintained roadways or other standard approved by the Department of Public Works.

**Where a conflict between the roadway classifications of the Circulation Element and the most current Public Works Plans and Specifications may exist, the Director of Public Works shall determine the appropriate street section to be used for roadway design and construction. Zoning ordinance standards will continue to be enforced using the previously adopted roadway classifications until a zoning ordinance amendment, reflecting the roadway classifications above, is completed.**

**TABLE II-1  
ROADWAY SEGMENT LEVELS OF SERVICE (LOS) CRITERIA**

|                   | Street Classification     | Total Lanes | Level of Service Thresholds (vehicles / per day / per lane) |       |        |        |        |
|-------------------|---------------------------|-------------|---|-------|--------|--------|--------|
|                   |                           |             | A   | B     | C      | D      | E      |
| <b>Urban</b>      | 50 Ft Local (Urban)       | 2           | 350   | 950   | 1,700  | 2,950  | 5,000  |
|                   | 60 Ft Minor Collector     | 2           | 350   | 950   | 1,700  | 2,950  | 5,000  |
|                   | 80 Ft Major Collector     | 2           | 700   | 1,900 | 3,400  | 5,900  | 10,000 |
|                   | 80 Ft Major Collector     | 4           | 2,520   | 4,230 | 5,940  | 7,110  | 9,000  |
|                   | 110 Ft Minor Arterial     | 4           | 3,000   | 5,000 | 7,000  | 8,400  | 10,000 |
|                   | 110 Ft Minor Arterial     | 6           | 3,400   | 5,625 | 7,875  | 9,450  | 11,250 |
|                   | 135 Ft Principal Arterial | 4           | 3,750   | 6,250 | 8,750  | 10,500 | 12,500 |
|                   | 135 Ft Principal Arterial | 6           | 4,500   | 7,500 | 10,500 | 12,600 | 15,000 |
| <b>Industrial</b> | 70 Ft Minor Collector     | 2           | 350   | 950   | 1,700  | 2,950  | 5,000  |
|                   | 110 Ft Major Collector    | 2           | 700   | 1,900 | 3,400  | 5,900  | 10,000 |
| <b>Rural</b>      | 60 Ft Local               | 2           | 350   | 950   | 1,700  | 2,950  | 5,000  |
|                   | 60 Ft Minor Collector     | 2           | 350   | 950   | 1,700  | 2,950  | 5,000  |
|                   | 80 Ft Major Collector     | 2           | 350   | 950   | 1,700  | 2,950  | 5,000  |
|                   | 80 Ft Major Collector     | 4           | 1,400   | 2,350 | 3,300  | 3,950  | 5,000  |
|                   | 110 Ft Minor Arterial     | 4           | 3,000   | 5,000 | 7,000  | 8,400  | 10,000 |
|                   | 135 Ft Principal Arterial | 4           | 3,750   | 6,250 | 8,750  | 10,500 | 12,500 |
|                   | 135 Ft Principal Arterial | 6           | 4,500   | 7,500 | 10,500 | 12,600 | 15,000 |

### Other Requirements

Within the Spheres of Influence of any city, roadway improvements, dedications, building setbacks, and road reservations shall meet the development standards of the city consistent with the Spheres of Influence Policy in the Land Use Element of the General Plan, except in those areas subject to an individual city/county agreement. These requirements may change from time-to-time through the adoption or revision of local land use plans or standards. To ensure consistency with a city's development standards, additional right-of-way may be required for each of the roadway classifications described above. Where design and access requirements of a city differ from those established by the County, development shall be required to meet the standards of the city. The County will consult with the city prior to the construction of transportation improvements within its sphere of influence to ensure consistency with the standards of that city.

### Dedication Requirements

When land is subdivided or otherwise divided into smaller parcels in Stanislaus County, or when buildings are constructed, existing ~~zoning and subdivision~~ **local** regulations provide for the dedication of land for eventual public road use within or adjacent to the development. It is required that sufficient land be dedicated to provide the width necessary for the ultimate road right-of-way based on the road classification of specific street plans. This dedication is based on the presumption that development will intensify use of the property and of the streets which provide access thereto. ~~Findings must be made by~~ The Planning Commission and the Board of Supervisors **must identify and make findings** supporting this presumption when an ~~subdivision~~ application **for development** is being considered.

~~Funds for the acquisition of road right-of-way are derived from several sources. Typical of these sources is Highway Users Tax Funds, transportation funds from sales tax, fines, bonds, the County General Fund, and earned interest. Since these funds are used for maintenance and replacement, as well as for the acquisition of right-of-ways, any money utilized for the acquisition of road right-of-ways in new developments will decrease the amount of money available for the maintenance and construction of the County road system elsewhere. Road right-of-way acquisition policies in new developments encompass the possibility of further development beyond these particular pieces of property and usually require the provision of road right-of-ways through the property to adjoining property in order to provide access in the future. Policy One of Goal One addresses dedication requirements.~~

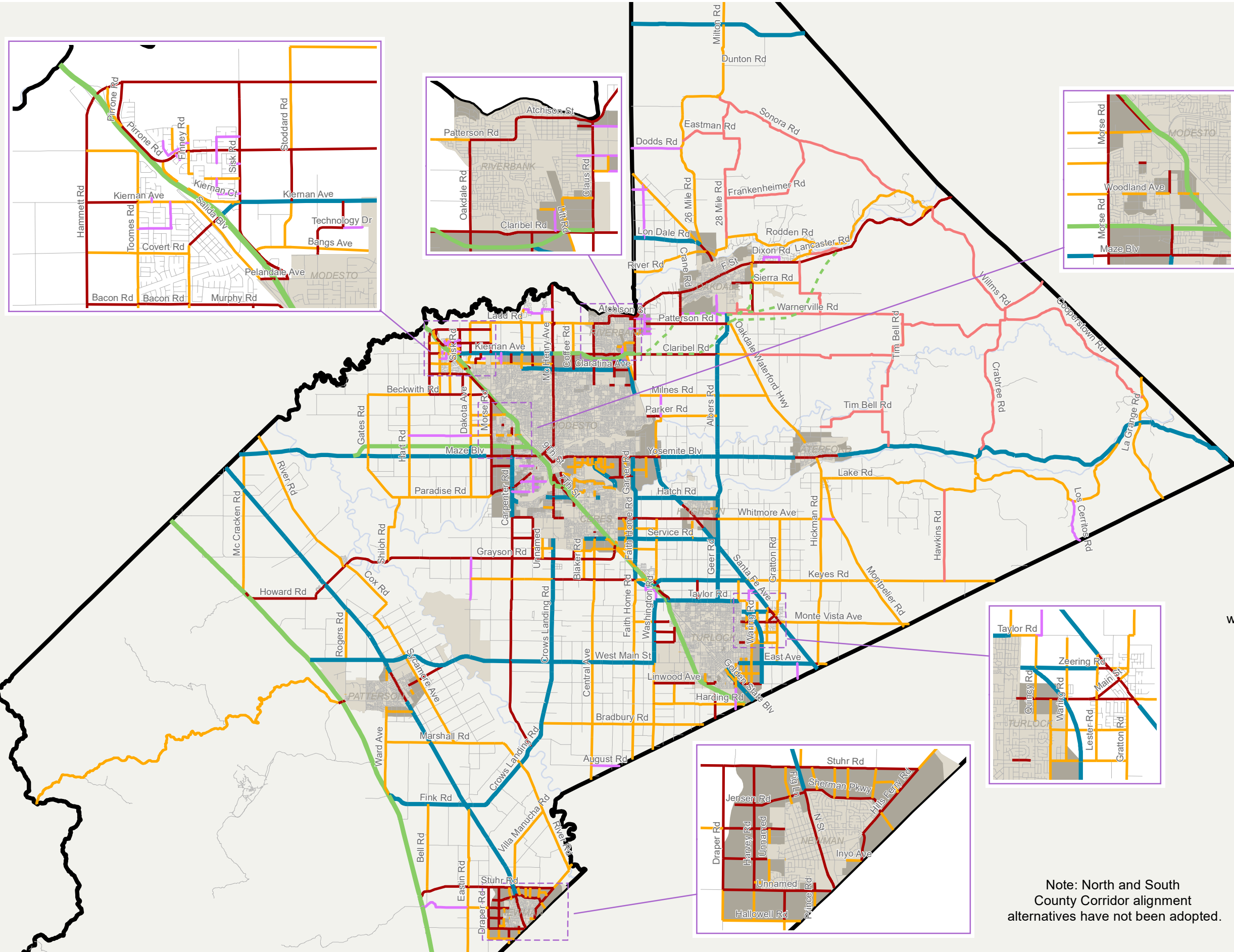


FIGURE II-1  
**CIRCULATION  
 DIAGRAM**

with Road Classifications Identified

- Roadway Classification**
- Interstate/Expressway
  - Principle Arterial (OPA)
  - Minor Arterial (MA)
  - Major Collector (MJC)
  - Minor Collector 80' (MC80)
  - Minor Collector (MC)
  - Local
  - - - NCC Alignment Alternatives
  - City Limits
  - Sphere of Influence
  - County Boundary
  - Inset

Note: North and South County Corridor alignment alternatives have not been adopted.

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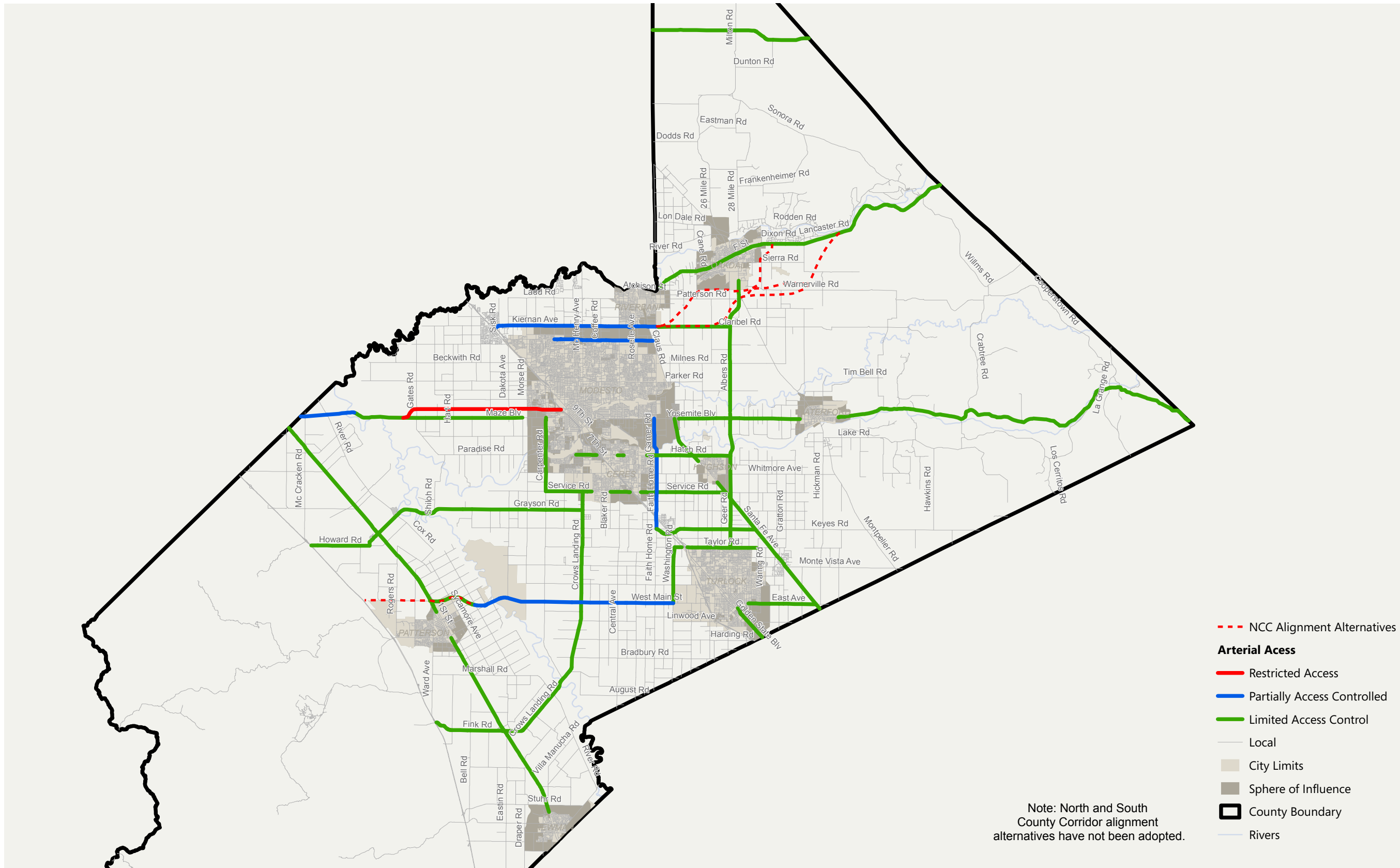


FIGURE II-2  
Arterial Access Designation





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**TABLE II-12**  
**RURAL LOCAL OR RURAL MINOR COLLECTOR ROUTES ROADWAYS REQUIRING AT**  
**LEAST 80' OF RIGHT-OF-WAY\***

The following designated **Rural Local or Rural Minor Collector routes roadways** require at least 80' of right-of-way either because of **non-ideal environments including rolling terrain where additional sight distance and/or super elevations are needed or in locations where more land is required for drainage or safety purposes**~~hilly terrains or greater than average anticipated traffic flows:~~

1. Claribel Road: Oakdale-Waterford Highway to Tim Bell Road.
2. Cooperstown Road: Warnerville Road to La Grange Road.
3. Crabtree Road: Highway 132 to Warnerville Road.
- ~~4. Del Puerto Canyon Road: Interstate 5 to Santa Clara County.~~
- ~~5. Dunton Road: Milton Road to Highway 4.~~
- ~~4.6.~~ Eastman Road: 26 Mile Road to 28 Mile Road.
- ~~5.7.~~ Emery Road: Warnerville Road to Fogarty Road.
- ~~6.8.~~ Fogarty Road: Wamble Road to Emery Road.
- ~~7.9.~~ Frankenheimer Road: 28 Mile Road to Sonora Road.
- ~~8.10.~~ Hawkins Road: Lake Road to Keyes Road.
- ~~9.11.~~ Hazeldean Road: Highway 132 to Tim Bell Road.
- ~~10.12.~~ Hickman Road: East Avenue to Whitmore Avenue.
- ~~13. Kennedy Road: Highway 108/120 to Sonora Road.~~
- ~~14. Keyes Road: Santa Fe Avenue to Merced County Line.~~
- ~~15. Lake Road: Hickman Road to Highway 132.~~
- ~~11.16.~~ Lancaster Road: Orange Blossom Road to Highway 108/120.
- ~~17. Milnes Road: Claus to Oakdale-Waterford Highway.~~
- ~~18. Milton Road: Highway 4 to Galaveras County Line.~~
- ~~19. Orange Blossom Road: Highway 108/120 to Sonora Road.~~
- ~~20. River Road: San Joaquin County Line to Highway 120.~~
- ~~12.21.~~ Rock River Road: Willms Road to Tuolumne County Line.
- ~~22. Rodden Road: Highway 120 to Orange Blossom Road.~~
- ~~23. Sisk Road: Kiernan Avenue north to end.~~
- ~~13.24.~~ Sonora Road: Milton Road to Highway 108/120.
- ~~14.25.~~ Tim Bell Road: Lone Oak Road to Warnerville Road.
- ~~15.26.~~ Twenty Eight Mile Road: Rodden Road to Sonora Road.
- ~~16.27.~~ Wamble Road: Fogarty Road to Orange Blossom Road.
- ~~17.28.~~ Warnerville Road: Albers Road to Cooperstown Road.
- ~~18.29.~~ Willms Road: Cooperstown Road to Highway 108/120.

\* This list only contains those **Rural Local or Rural Minor** Collector roadways that require 80 feet of right-of-way. ~~All other Collector routes are depicted in the Circulation Diagram depicted in Figure 2-2.~~

### **Recommended Approach Lanes**

Additional lanes, **needing additional right-of-way dedication**, may be necessary at intersections to accommodate traffic making left-and right-turns. The recommended approach lane design at each intersection along these roadways is represented in Table **2-2II-3 - Functional Classifications - Typical Roadway Characteristics**. ~~Precise-~~Intersection geometrics can be found in the **current** Stanislaus County Department of Public Works Standards and Specifications. These geometrics will be used when establishing building setbacks and dedication requirements for development projects located in and around intersections, and may be modified in specific cases where the traffic impact analysis shows that additional approach lanes are needed to accommodate projected traffic.

### **Official Plan Lines**

Official Plan Lines have been prepared for a number of roadways in the County and adopted by the Board of Supervisors. Adoption of Official Plan Lines shows the intent of the County to widen these streets to a specified width along a specified alignment or build a new road at some future time. Official Plan Lines are often used when it is undesirable or impractical to widen a road by requiring legal dedication on both sides of the existing center line. Official Plan Lines are established to prevent any unnecessary removal of buildings or important natural features when the County is ready to build the road. Once adopted, building activity is prohibited inside the established setback lines although existing buildings may remain.

Identified ultimate road widths and alignments for the eventual widening or construction of a road have the important advantage of minimizing the cost to the County in the future. If new structures are permitted to be constructed in the proposed right-of-way, the County will be obligated to purchase portions of buildings and land lying within the proposed street line. It is also hoped that the disruption and dislocation of privately-owned improvements would also be minimized to reduce impacts on property owners. Adoption of Official Plan Lines or identification of ultimate street width requires foresight because the entire process of developing a transportation corridor is a slow one. A number of years may elapse before the last building, or even a majority of the buildings, are set back to the adopted line. Building setbacks may cause hardships to the first buildings that are required to be set back of the new line because they appear to be placed at the back of a parcel with old buildings projecting in front of them on both sides.

The process of adopting an Official Plan Line entails extensive technical studies and public outreach including a **multi-modal transportation traffic-**analysis, environmental analysis, and detailed engineering studies to determine potential alignments and work with the affected property owners and the public to determine an appropriate alignment for each roadway. The Official Plan Lines adopted by the Board of Supervisors are listed in the Table **II-42-3**. Some portions of these roadways have been annexed into the spheres of influence or jurisdictional boundaries of the cities; therefore, city standards now apply to in those areas. This element includes proposed streets and roadways that are necessary to support development planned within the cities' general plans. Generally, these streets and roadways will be planned, developed and constructed upon annexation to the city. If, however, a city develops an Official Plan Line for any of these roadways, the city may also wish to submit that Official Plan Line to the County for adoption to ensure it is applied to new development within the sphere of influence.

**Table 2-2  
RECOMMENDED APPROACH LANES**

| Facility Type | Intersecting Road | Left | Through | Right |
|---------------|-------------------|------|---------|-------|
| Expressway    | Expressway        | 2    | 2 or 3  | 1     |
|               | Major*            | 2    | 2 or 3  | 1     |
|               | Collector*        | 1    | 2 or 3  | 1     |
|               | Local*            | 1    | 2 or 3  | 1     |
|               | Minor/Private     |      |         |       |
| Major         | Expressway*       | 2    | 2 or 3  | 1     |
|               | Major             | 2    | 2 or 3  | 1     |
|               | Collector         | 1    | 2 or 3  | 1     |
|               | Local             | 1    | 2 or 3  | 1     |
|               | Minor/Private     |      |         |       |
| Collector     | Expressway*       | 1    | 1 or 2  | 1     |
|               | Major             | 1    | 1 or 2  | 1     |
|               | Collector         | 1    | 1 or 2  | 1     |
|               | Local             | 1    | 1 or 2  | 1     |
|               | Minor/Private     | 0    | 1 or 2  | 0     |
| Local         | Expressway*       | 1    | 1 or 2  | 1     |
|               | Major             | 1    | 1 or 2  | 1     |
|               | Collector         | 1    | 1 or 2  | 1     |
|               | Local             | 1    | 1 or 2  | 1     |
|               | Minor/Private     | 1    | 1 or 2  | 1     |
| Minor/Private | Expressway        |      |         |       |
|               | Major             |      |         |       |
|               | Collector         | 0    | 1       | 0     |
|               | Local             | 0    | 1       | 0     |
|               | Minor/Private     | 0    | 1       | 0     |

**TABLE II-3  
FUNCTIONAL CLASSIFICATIONS - TYPICAL ROADWAY CHARACTERISTICS**

|              | Functional Classification | Typical ROW Width | ROW at Intersections | Lanes | Intersecting Roadways          | Private Property Access | Mobility/ Operating Speed |
|--------------|---------------------------|-------------------|----------------------|-------|--------------------------------|-------------------------|---------------------------|
| <b>Urban</b> | Freeway/ Expressway       | Varies            | Varies               | 4 - 8 | Interchange at 1 miles spacing | None                    | High                      |
|              | Principal Arterial        | 135'              | 180'                 | 4 - 6 | 1 per 1/2 mile                 | Very Limited            | High                      |
|              | Minor Arterial            | 110'              | 160'                 | 4 - 6 | 1 per 1/2 mile                 | Limited                 | Medium-High               |
|              | Major Industrial          | 80'               | 140'                 | 2 - 4 | 1 per 1/4 mile                 | Limited                 | Medium                    |
|              | Minor Industrial          | 70'               | 100'                 | 2     | 1 per 1/4 mile                 | Limited                 | Low-Medium                |
|              | Major Collector           | 80'               | 100'                 | 2 - 4 | 1 per 1/4 mile                 | Limited                 | Medium                    |
|              | Minor Collector           | 60'               | 90'                  | 2     | 1 per 1/8 mile                 | Limited                 | Low-Medium                |
|              | Local/Private             | 50'               | 60'                  | 2     | No Limit                       | Controlled              | Low                       |
| <b>Rural</b> | Freeway/ Expressway       | Varies            | Varies               | 4 - 8 | Interchange at 2 mile spacing  | None                    | High                      |
|              | Principal Arterial        | 135'              | 180'                 | 4 - 6 | 1 per 1/2 mile                 | Very Limited            | High                      |
|              | Minor Arterial            | 110'-             | 160'                 | 2 - 4 | 1 per 1/2 mile                 | Limited                 | Medium-High               |
|              | Major Collector           | 80'               | 120'                 | 2 - 4 | 1 per 1/4 mile                 | Limited                 | Medium-High               |
|              | Minor Collector           | 60'               | 100'                 | 2     | 1 per 1/4 mile                 | Limited                 | Medium-High               |
|              | Local/Private             | 60'               | 80'                  | 2     | 1 per 1/4 mile                 | Controlled              | Low-High                  |

1. When the surrounding land use is zoned "M" - Industrial, the road classifications shall conform to the two Industrial Road Standards. Based upon future anticipated traffic volumes, the road should be either the 2-lane 70-foot 2-lane version or the 110-foot 4-lane Industrial Road. The majority of the roads will be 70-foot 2-lane Industrial Minor Collectors.
2. The right-of-way widths shown represent typical right-of-way widths needed to accommodate the number of travel lanes necessary to support anticipated traffic volumes, shoulders, roadside ditches (rural roadways), curb, gutter, sidewalk, and bicycle lanes (where appropriate). Additional right-of-way width will be necessary at approaches to intersections to accommodate turn pockets for safety. A minimum of 200' from the cross street's ROW boundary will be required. Additional ROW beyond the 200' may be needed if an intersection has been studied by the County and is determined to require longer approach lanes and tapers due to the traffic operations and safety needs. A Transportation Impact Assessment for a



developed project may also identify the additional needs of the intersection in accordance with current design standards. See Table II-2 for Rural Minor Collector and Rural Local Roadways that will require additional right-of-way due to other conditions.

3. **Lanes.** The number of lanes shown represents the typical number of lanes likely to be necessary for the various types of roadways. In unusual cases, additional lanes may be necessary to accommodate higher traffic volumes.
4. **Intersecting Roadways.** The values in this column represent the typical maximum number of intersections along the various types of roadways. In some cases, the number of intersections may be greater; however, a traffic analysis will be required indicating that the safety and function of the roadway will not be significantly compromised.
5. **Private Property Access.** Private property access to roadways maintained by Stanislaus County is granted through the issuance of an encroachment permit by the Department of Public Works. No access to private property will be permitted on Freeways or Expressways. Access to local roadways will generally be approved; however, guidelines for driveways on local roadways in urban areas have been established in the Stanislaus County Public Works Standards and Specifications. Generally, driveways on other roadway types will be permitted; however the number of driveways will be limited to preserve the safety and function of the roadway. In some cases joint driveways serving more than one parcel may be required.
6. **Mobility/Operating Speed.** The descriptions in this column represent the perceived level of mobility (usually represented by operating speed) a motorist may anticipate to experience on the various roadway types during non-peak hours.

**Table 2-3  
ADOPTED PLAN LINES**

| NAME                                | FROM               | TO                     |
|-------------------------------------|--------------------|------------------------|
| 26 Mile Road                        | Dodds Road         | Sonora Road            |
| Blue Gum Avenue                     | Morse Road         | North Ninth Street     |
| Briggsmore Avenue                   | State Route 99     | Claus Road             |
| Carpenter Road                      | Crows Landing Road | Whitmore Avenue        |
| Claus Road                          | State Route 132    | State Route 108        |
| Coffee Road                         | Orangeburg Avenue  | Sylvan Road            |
| Coffee Road                         | Sylvan Road        | Patterson Road         |
| Crane Road                          | Patterson Road     | West F Street          |
| Crows Landing                       | State Route 99     | Whitmore Avenue        |
| Crows Landing                       | Whitmore Avenue    | West Main Street       |
| Fink Road                           | Interstate 5       | State Route 33         |
| Fulkerth Avenue                     | State Route 99     | Golden State Boulevard |
| Hatch Road                          | Carpenter Road     | Crows Landing Road     |
| Hatch Road                          | State Route 99     | Mitchell Road          |
| Hawkeye Road                        | State Route 99     | Berkeley Avenue        |
| Howard Road                         | Interstate 5       | State Route 33         |
| McHenry-Ladd-Patterson Intersection |                    |                        |
| Mc Henry Avenue                     | Briggsmore Avenue  | Stanislaus River       |
| Monte Vista Avenue                  | State Route 99     | Berkeley Avenue        |
| Monte Vista Avenue                  | State Route 99     | Golden State Boulevard |

|                          |                    |                      |
|--------------------------|--------------------|----------------------|
| North Olive Avenue       | Canal Drive        | Monte Vista Avenue   |
| Oakdale Road             | Scenic Drive       | Patterson Road       |
| Orange Blossom Road      | Rodden Road        | Knights Ferry        |
| Paradise Road            | Sutter Avenue      | Dunning Lane         |
| Pelandale-Claratina      | Dale Road          | Claus Road           |
| Roselle Avenue           | Briggsmore Avenue  | Floyd Avenue         |
| Scenic Drive             | Modesto City Limit | Claus Road           |
| Sperry Road              | Interstate 5       | State Route 33       |
| Standiford-Sylvan        | State Route 99     | Claus Road           |
| Stearns Road             | State Route 108    | Oakhurst Drive       |
| Stuhr Road               | Interstate 5       | State Route 33       |
| Sylvan-Standiford Avenue | State Route 99     | Claus Road           |
| Yosemite Boulevard       | Modesto City Limit | Waterford City Limit |
| Zeering Road             | State Route 99     | Hawthorne Street     |

**TABLE II-43  
OFFICIAL PLAN LINES**

| NAME                | FROM               | TO               |
|---------------------|--------------------|------------------|
| 26 Mile Road        | Dodds Road         | Sonora Road      |
| Carpenter Road      | Crows Landing Road | Whitmore Avenue  |
| Coffee Road         | Sylvan Road        | Patterson Road   |
| Crows Landing       | Whitmore Avenue    | West Main Street |
| Fink Road           | Interstate 5       | State Route 33   |
| Howard Road         | Interstate 5       | State Route 33   |
| Mc Henry Avenue     | Briggsmore Avenue  | Stanislaus River |
| Orange Blossom Road | Rodden Road        | Knights Ferry    |
| Stuhr Road          | Interstate 5       | State Route 33   |

**Study Areas**

Prior to adopting an Official Plan Line, focused traffic, engineering and environmental studies may be conducted to determine the appropriate alignment and right-of-way requirements for major transportation improvements. These studies are particularly useful when a new road is required or special circumstances, such as limited sight visibility or hilly terrain, warrant a more detailed traffic operations analysis to determine the appropriate design and alignment for the future facility. These studies will require extensive involvement by the cities, other public agencies, and the public, to determine the appropriate design and alignment of each facility. **Eight** The special study areas **have been are** identified **as shown** in Table II-52-4.

**Table 2-4  
SPECIAL STUDY AREAS**

| <b>STUDY AREA</b> | <b>DESCRIPTION</b>                                   | <b>FROM</b>       | <b>TO</b>               | <b>SOURCE</b>               |
|-------------------|--|-------------------|-------------------------|-----------------------------|
| 1                 | Las Palmas Bypass                                    | Patterson         | San Joaquin River       | StanCOG/Patterson           |
| 2                 | Southeast Turlock Interchange                        | Turlock           | Merced County Line      | Turlock                     |
| 3                 | Washington Road Extension                            | Turlock           | Keyes                   | Turlock                     |
| 4                 | Dakota Avenue/Service Road (Tuolumne River Crossing) | Paradise Road     | Service Road            | Modesto/Ceres               |
| 5                 | North County Transportation Corridor                 | State Route 99    | East of Oakdale         | StanCOG                     |
| 6                 | Briggsmore Avenue Extension                          | Briggsmore Avenue | Milnes Road             | StanCOG/Modesto             |
| 7                 | State Route 132 Realignment and Widening             | East of Empire    | San Joaquin County Line | StanCOG                     |
| 8                 | Claus/Garner/Faith Home Expressway                   | Modesto           | Keyes                   | StanCOG                     |
| 9                 | SR-99/Kioman Avenue                                  | Salida            |                         | County Project Study Report |
| 10                | SR-99/Hammett Road                                   | Salida            |                         | County Project Study Report |

**TABLE II-5  
SPECIAL STUDY AREAS**

| Study Area | Description                          | From           | To                              | Source            |
|------------|--------------------------------------|----------------|---------------------------------|-------------------|
| 1          | South County Corridor                | Interstate 5   | San Joaquin River               | Stanislaus County |
| 2          | North County Transportation Corridor | State Route 99 | State Route 120 East of Oakdale | Stanislaus County |
| 3          | SR132 Realignment and Widening       | East of Empire | San Joaquin County              | StanCOG           |
| 4          | Claus/Garner/Faith Home Expressway   | Modesto        | Keyes                           | StanCOG           |

~~**Las Palmas Bypass:** The Las Palmas Bypass (or Orange Avenue Extension) would provide a new connection from Sperry Road in Patterson to Las Palmas Avenue just west of the San Joaquin River. This project is planned to alleviate congestion along the Las Palmas corridor as proposed in the City of Patterson General Plan.~~

**South County Corridor.** The South County Corridor would provide connectivity to I-5 near the City of Patterson to Highway 99 near the City of Turlock.

~~**Southeast Turlock Interchange:** The Southeast Turlock interchange is a study funded by a special federal grant to the City of Turlock and County of Merced. A joint planning study is underway to examine the potential realignment of State Route 165 to provide a bypass for the community of Hilmar that would connect to a new State Route 99 interchange in the southeast Turlock area which is required to support future planned development in the City of Turlock General Plan.~~

~~**Washington Road Extension:** The Washington Road Extension would examine the possibility of extending the proposed expressway along Washington Road in the Turlock area to connect at the State Route 99 interchange at Keyes Road, rather than at the Taylor Road interchange. The purpose of the new connection is to reduce conflicts between large trucks and passenger vehicles.~~

~~**Dakota Avenue/Service Road River Crossing:** To implement the expressway system proposed in the general plans of the cities of Modesto and Ceres an Official Plan Line will need to be adopted for the north-south expressway proposed along the Dakota Avenue alignment crossing the Tuolumne River and connecting to Service Road in the Ceres area.~~

**North County Transportation Corridor.** The North County Transportation Corridor is a ~~concept to~~ **construct an proposed** expressway from State Route 99 in the Salida area to ~~a point east of SR 120, east of Oakdale.~~ perhaps at the same location that the new State Route 120 (otherwise known as the Oakdale Bypass) would connect to existing State Route 108/120. StanCOG has initiated a planning effort that will examine potential alignments and facility types within approximately one mile of the Kiernan Avenue and Claribel Road corridors through the  ~~A Joint Powers Authority has been formed and has initiated an environmental effort that will select a preferred alignment through the~~ Modesto, Riverbank and Oakdale areas.

~~**Briggsmore Avenue Extension:** To implement the expressway system proposed in the City of Modesto General Plan, an extension of the Briggsmore Avenue expressway is planned from east of Claus Road along an alignment parallel and extending from MID Lateral No. 3 to Milnes Road.~~

**State Route 132 Realignment and Widening.** Realignment, widening, and operational improvements along the State Route 132 corridor from Empire to the San Joaquin County Line have been planned for many years. A federal grant has been secured to investigate ways to connect the portion of State Route 132 east of State Route 99 to its new proposed alignment south of, and parallel to, Kansas Avenue west of State Route 99. Project Study Reports have been prepared by Caltrans for the construction of an expressway west of State Route 99 to Interstate 580.

**Claus/Garner/Faith Home Expressway.** The general plans of the cities of Modesto and Ceres plan for the construction of an expressway and new Tuolumne River crossing along the Claus Road, Garner road, and Faith Home Road corridors from north Modesto to Keyes Road in the Keyes area. A Project Study Report was initiated by StanCOG to develop an Official Plan Line for the route, to resolve internal circulation issues within the Beard Industrial Tract, and determine the best engineering solution to cross the Tuolumne River in this area.

~~**State Route 99/Kiernan Avenue Interchange:** The County has initiated a Project Study Report to determine potential improvements required to support implementation of the Salida Community Plan.~~

~~**State Route 99/Hammitt Road Interchange:** The County has initiated a Project Study Report to determine potential improvements required to support implementation of the Salida Community Plan.~~

### **Scenic Highways**

~~Section 65302(h) of the Government Code requires the general plan to include a Scenic Highways Element for the development, establishment, and protection of scenic highways pursuant to the provision of the Streets and Highways Code. Interstate 5 is the only officially designated State Scenic Highway in Stanislaus County. Standards for official designation of scenic highway rest on the analysis, planning, and protection of the scenic corridor through which the highway traverses. Although the emphasis of the scenic highway is on the designation of state highway routes as scenic routes, this does not preclude local agencies from developing and adopting local scenic designations on County routes. The Scenic Highway designation is an overlay and not a separate street classification. The scenic highway designation maintains areas which are in their natural or undeveloped condition. The State of California has designated various state highways as having natural scenic beauty worthy of preservation. This highway designation involves land use controls within the corridor to maintain the natural beauty of the area.~~

### **Highway 99 Visual Enhancement Efforts**

While the primary function of the County's transportation network is to move people and goods from one place to another, each time someone travels on Stanislaus County's roadways, they see a view of the community, whether it is from the window of a car, truck, bus or train, or from the seat of a bicycle. Whether for business or pleasure, these images gathered while traveling through the community affect perceptions and feelings about the community. **CA collaborative efforts led by the Great Valley Center is have** raising awareness about ways communities can enhance the visual quality of major transportation corridors, in particular the Highway 99 corridor, and key gateways into communities located along major transportation corridors. To facilitate implementation of **these** efforts, Caltrans adopted a master plan that provides examples of the types of improvements that can be made on Highway 99 that will not only improve the appearance of the corridor but meet State

Highway design standards. The Stanislaus Council of Governments initiated a master planning effort for the Highway 99 corridor involving the cities of Turlock, Ceres, and Modesto, and the County of Stanislaus. These planning efforts provide suggestions and strategies on how transportation improvement projects, as well as development projects located on or within the view shed of the Highway 99 corridor, can be designed to improve the attractiveness of the corridor and help promote economic development, encourage tourism, highlight our natural resources, and generally improve the quality of the life in the county.



## **SAFETY**

**Nationwide, approximately 40 percent of county roadways are inadequate for current travel, and nearly half of the rural bridges longer than 20 feet are structurally deficient. (FHWA, 2012) Backlogs of maintenance and system preservation have long plagued the nation's infrastructure. As such, Stanislaus County is moving towards minimizing the infrastructure needs for operations and aesthetics, and increasing the emphasis on roadway Safety. This is a multi-modal approach that will provide safe infrastructure for all modes of transportation, including vehicles, bicycles, pedestrians, and transit.**

**Moving goods and people throughout Stanislaus County requires a safe and efficient network of roadways. While the Level of Service of a roadway is generally determined by average travel times and average driver delay, safety is not factored into the Level of Service metric. As such, Stanislaus County may require additional roadway improvements where necessary to improve the safety characteristics of a road. Safety improvements may include, but are not limited to, the widening of paved shoulders, the addition of travel lanes, bicycle lanes, transit priority lanes, passing lanes, left/right turn lanes, intersection signalization or roundabouts.**

## BICYCLE AND PEDESTRIAN

Stanislaus County offers excellent conditions for bicycle and pedestrian transportation. ~~Although relatively few marked bicycle facilities have been constructed in the County, ¶the County is offers~~ generally flat ~~terrain~~ has and a temperate climate, ~~which are suitable conditions for cyclists and pedestrians. and major destinations are within an easy ride of most residences.~~ According to the 2000 Census, approximately 3.1% of the workers reported that they rode a bike or walked to work regularly. ~~Relatively few marked bicycle facilities have been constructed in the County.~~ In agricultural areas, the County provides adequate striping and paving in accordance with Caltrans and **American Association of State Highway and Transportation Officials (AASHTO)** standards to safely accommodate bicycle travel whenever a roadway is widened, and, where adequate right-of-way exists, whenever a roadway is resurfaced, restored, or rehabilitated on all ~~routes~~**roadways** except **Rural Local/Rural Minor Collector** roadways. Marked and/or signed bicycle lanes and paths are provided in accordance with the ~~Regional Bicycle Action Plan~~ **Non-Motorized Transportation Plan** adopted by StanCOG, the adopted Community Plans for the urban areas of the County, and the general plans of the cities within the spheres of influence.

## PUBLIC TRANSIT

Public transportation systems are being called upon to provide more services, serve more people and businesses, and satisfy more **transportation** needs than ever before. **Rising fuel** costs, more stringent air quality regulations, and **economic fare** affordability are making transit a more attractive alternative for both commuters and local government. At the same time, public transit **agencies are** ~~is~~ being asked to deliver services more efficiently by reducing costs and to operate more effectively by targeting resources where people use them. Transit ridership continues to increase steadily, but accounts for only about one percent of the commute trips each-day. **Transit service education, marketing efforts, and ongoing service improvements continue to be areas of focus with the end goal of promoting and increasing transit ridership; however,** ~~Development~~ patterns in the County, characterized by low housing densities and dispersed business centers, continue to make the Stanislaus area difficult to access and serve by public transit. **Continued coordination efforts between land use and transportation planning may assist in mitigating transit access issues.**

The Stanislaus County Public Works Transit Division ~~is the administrator for~~ **manages** the County's ~~intercity~~ public transportation system, ~~called known as the~~ Stanislaus Regional Transit, or StaRT. StaRT provides **transit service throughout the County including cities and unincorporated communities and to the cities of Merced and Gustine in Merced County.** ~~to sixteen (16) cities and communities in Stanislaus County and the city of Gustine in Merced County.~~ StaRT operates fixed route, deviated fixed route, curb-to-curb dial-a-ride transportation services and provides non-emergency medical transportation to Bay ~~A~~ area medical facilities. The **Transit** Division has Memorandums of Understanding with ~~the three~~ **three** cities of Newman, **Oakdale**, Patterson, **Riverbank**, and Waterford, to operate dial-a-ride services ~~for in~~ their respective cities.

**As part of the Transit Division's long-range planning goals and objectives, StaRT will implement a "Commuter Express" service between Stanislaus County and the Dublin Bay Area Rapid Transit (BART) Station in the near future. This service will provide commuter express service to Bay Area commuters thereby providing alternative transportation choices, enhanced access to work, and will assist in reducing traffic congestion, green-house gas emissions, and will contribute toward the improvement of the region's air quality. Additionally, StaRT will provide Americans with Disabilities Act (ADA) Paratransit Service, as mandated by the Federal Transit Administration (FTA). This service provides door-to-door transportation services to seniors and people with disabilities who are unable to use fixed route transit services. Future service improvements will also be implemented to include a "connector" service that will connect more County residents to the non-emergency medical transportation service which provides public transportation service to Bay Area medical facilities.**

**Other public transit operators within Stanislaus County include MAX (Modesto Area Express), CAT (Ceres Area Transit), and BLAST (The Bus Line Service of Turlock).** ~~Being the intercity operator,~~ **As the County's transit services provider,** StaRT ~~has connectivity with these~~ local transit operators **and serves the transit centers in the cities of** ~~and has transfer points within various cities, including Turlock, Ceres, and Modesto, Riverbank Oakdale.~~ **with service to transfer locations in the cities of Ceres, Riverbank, Oakdale and Patterson.** This enables County residents to connect ~~between~~ **with regional,** intra-city and inter-city transit ~~so they can and to~~ travel throughout the County. Transit services are supported through the construction and operation of ~~bus maintenance transit amenities and~~ facilities, **such as bus** shelters, **bus** benches and **bus** stop signs.

~~Various~~ **The Transit Division conducts transit** planning **studies and other related** activities ~~are conducted by the County~~ to ensure that transit services ~~are provided~~ **are in an cost-efficient and cost-effective manner.** ~~In October 2000, the County adopted a long-range transit plan that projects the long-term transit needs of the county and presents a vision for StaRT service. By way of these studies, the County also prepares short-range~~ **and long-range** transit plans ~~covering a five-year period to look at~~ **improving** coordination between **transit operators in Stanislaus County and establish strategic plans for** and future transportation services to the University of California at Merced, Stanislaus County business parks and other locations within the County. ~~The plan will also look at future capital projects, purchases,~~ including **the purchase of** additional buses and **construction of** transfer ~~stations locations throughout the County within key cities.~~

## RAIL SERVICE

### Passenger

As an increasing number of commuters travel outside the County to jobs located in the Bay Area and Sacramento, the role of passenger rail service is changing. Traditionally, passenger rail service has met the travel needs of the recreational traveler. As time goes on, however, passenger rail is beginning to take on more importance as a commuter transportation option. ~~The success of the Altamont Commuter Express from San Joaquin County to San Jose, funded largely through the passage of their half-cent sales tax, presents an alternative vision for the future role of passenger rail service in Stanislaus County.~~

Presently, Stanislaus County has access to three passenger rail services - the Bay Area Rapid Transit system (BART), the Altamont-Commuter Express (ACE), and Amtrak. BART service can be accessed by traveling by car to the Dublin-Pleasanton station or taking the Modesto Area Express (MAX) BART Express bus. ACE service can be accessed by traveling by car to the Lathrop/Manteca station or by taking inter-city bus service offered by the MAX ACE Express service. Depending on the destination, Amtrak service may be accessed locally at the Amtrak station ~~off on~~ Parker Road, **on Held Drive, in Modesto** or by traveling to stations located in the **unincorporated community of Denair (by way of the StaRT Turlock-Modesto shuttle service) or the** City of Stockton. **Amtrak can also be accessed through MAX, which connects to the Modesto Amtrak Station.**

**Altamont Commuter Express (ACE). ACE forward is a phased improvement program to reduce travel time and improve service reliability and passenger facilities along the existing Stockton to San Jose corridor, and to extend ACE rail service to Modesto and to Merced. This program would provide the foundation for the long term plan for SJRRC inter-city passenger rail services.**

**The program would improve the existing ACE service managed by SJRRC by delivering safety and operational improvements that enable expansion of service to six daily round trips between Stockton and San Jose and extending ACE service to Modesto, which could occur as early as 2018. Following that, the program would extend ACE service to Merced and service frequency from Stockton to San Jose would increase to 10 or more daily round trips, perhaps as soon as 2022. The ACE forward EIR/IS will include development of preliminary engineering designs and assessment of environmental effects associated with the construction, operation, and maintenance of rail improvements, including new track corridors, additional track, track realignments, ancillary facilities, new stations, and station improvements along the Altamont Corridor.**

~~In 2001, the County commissioned a study to examine potential alternatives to extend the ACE service to Stanislaus County. The study concluded that, with roughly fifteen percent (15%) of the passengers on ACE trains residing in Stanislaus County, passenger rail could work but would require a considerable infrastructure investment. The recommendations of this study should be reviewed and considered in future planning efforts.~~

~~In 2003, the Bay Area Rapid Transit District (BART) began studying the feasibility of extending some type of service to connect Walnut Creek with Pleasanton, then eastward along the Interstate 580 corridor perhaps as far east as Tracy. Four different options are being considered using three different technologies, including light diesel multiple units, heavy diesel multiple units and bus rapid transit.~~

~~High speed rail continues to be explored by the California High Speed Rail Authority as an alternative to driving and flying across the State. If implemented, this system would forever change the way people travel between cities and counties in California by offering an alternative to driving or flying. Studies suggest that roughly eighteen percent (18%) of the riders would come from the Central Valley.~~

**The California High-Speed Rail project is a planned future high-speed rail system in the state of California and headed by the California High-Speed Rail Authority (CHSRA). Initial funding for the project was approved by California voters on November 4, 2008, with the passage of Proposition 1A authorizing the issuance of US \$9.95 billion in general obligation bonds for the project. The CHSRA is currently tasked with completing the final planning, design and environmental efforts. The planned system would serve major California cities including San Francisco, Los Angeles, Sacramento, San Jose, Fresno, Bakersfield, Palmdale, Anaheim, Irvine, Riverside and San Diego.**

### **Freight**

Railroad operations in Stanislaus County include high speed, **approximately 50 to 60 miles per hour freight rail**, mainline operations on the Burlington Northern and Santa Fe (BNSF) Railway and Union Pacific Railroad (UPRR) and low speed **freight rail, less than 25 miles per hour**, mainline and switching operations on the BNSF Railway, UPRR, Sierra Railroad, California Northern Railroad, Modesto and Empire Traction Company Railroad, and Tidewater Southern Railroad.

**Union Pacific Railroad (UPRR).** The UPRR in Stanislaus County includes operations on the main line which passes through Salida, Modesto, Ceres, Keyes, and Turlock. The UPRR also operates on the **California Northern Railroad** line located on the west side of the county, which passes through Westley, Patterson, Crows Landing, and Newman.

**Burlington Northern and Santa Fe (BNSF) Railway.** Operations on the BNSF Railway in Stanislaus County occur on the mainline which runs through Riverbank, Hughson, Empire, and Denair, and on a branch line which connects the mainline at Riverbank with the Sierra Railroad in Oakdale.

**Sierra Railroad.** The Sierra Railroad operates between Oakdale and Standard, and includes both freight and passenger trains. Freight trains are operated by Union Pacific and Burlington Northern Santa Fe and usually operate roughly three times per week. Passenger trips travel between Oakdale and the eastern Stanislaus County Line and include entertainment style railroad travel approximately three to five times per week with most trips occurring Thursday through Sunday.

**Modesto and Empire Traction (M&ET) Company Railroad.** The Modesto and Empire Traction Company is a short-line railroad which connects switching operations between the Union Pacific Railroad in Modesto and the Burlington Northern Santa Fe Railway in Empire. Train lengths can vary from one locomotive with four cars to up to several locomotives with 60 cars.

**Tidewater Southern Railroad.** The Tidewater Southern Railroad is a branch line operation of the Union Pacific Railroad. The line runs in a general north-south route through Stanislaus County, from the City of Stockton to North Modesto and from the City of Turlock to South Modesto. The portion of the line from just south of Bangs Avenue through Modesto to Bonniefair was abandoned in 2000 and sections were removed or paved over in 2003. **A further abandonment was applied for in 2009 with the Surface Transportation Board from Bangs Road to a point south of the City of Escalon, in San Joaquin County.** ~~North of Bangs Road~~**Escalon**, operations typically occur three days per week on Tuesday, Thursday and Saturday. However, service may be operated more or less frequently depending on demand.



**Freight Intermodal ~~Transfer~~ Facilities**

**Intermodal facilities offer opportunities for serving freight at locations where an interface between transportation systems occurs while helping to ease traffic congestion. An intermodal facility for freight is provided in the Beard Industrial District.**

## AVIATION

Air facilities in Stanislaus County serve a number of needs, including scheduled commercial air passenger service, recreational flights, ~~military operations~~, agricultural crop dusting services, cargo services and private business flights. There are ~~five~~ **three** major facilities of concern for circulation and transportation purposes: (1) Modesto City-County Airport (Harry Sham Field); (2) Oakdale Municipal Airport; ~~(3) Turlock Airpark; (4) and (5) proposed~~ **Crows Landing General Aviation Airport Air Facility.** ~~and (5) Patterson Airport.~~ The Modesto-Stanislaus County Airport is currently the only airport that provides regularly scheduled air passenger service. The remaining air fields in the County are either private, not open to the public, or used purely for agricultural purposes.

Air freight service is characterized by fast shipment of small bulk items or high value items over long distances at higher cost. For these reasons, air service does not account for a significant proportion of the tonnage of goods moved into and out of the region. A significant feature of air movement is its dependability and very short in-transit time. In many new businesses seeking to open new markets, and in businesses dealing in high value items, air shipment is an important means of providing rapid access to distant manufacturing facilities, and thereby eliminating large inventory requirements. In such cases, air shipment makes it possible to establish supply lines quickly and lowers the cost of maintaining inventory significantly. This offsets the higher cost of air service.

~~In 2004, the County acquired title to 1,528 acres of federal land formerly occupied by the Crows Landing Naval Air Station. The Crows Landing Air Facility served as an auxiliary landing field for the Moffett Air Field in Santa Clara County until 1991 when the Defense Base Realignment and Closure Commission voted to close the base. The property was transferred from the Navy to the National Space and Aeronautics Administration (NASA) in 1994. NASA continued to conduct aviation research and flight testing until 1997. Through special federal legislation, approved by Congress in 1999, NASA transferred the facility to the County for the expressed purpose of fostering economic development. These economic development opportunities have been explored by the County since 1989 with the adoption of the Stanislaus County Economic Strategic Plan.~~

~~In 2001, the County adopted a Reuse Plan for the Crows Landing Air Facility that identified two distinct phases for development of the former base. Phase 1 would allow occasional fly-by's, touch-and-go training, and other aviation exercises, along with agricultural crop production and ongoing environmental remediation activities required to transfer the remainder of the property to the County. Phase 2 would allow the development of General Aviation airport through an aviation permit application that must be approved by the Aeronautics Division of the California Department of Transportation.~~

**The former Crows Landing Air Facility served as an auxiliary landing field for NAS Alameda and later Moffett Field until 1991, when the Defense Base Closure and Realignment (BRAC) Commission recommended that the airfield no longer be operated by the U.S. Navy. The National Aeronautics and Space Administration (NASA) assumed custody of the Crows Landing Naval Auxiliary Field in 1994. The United States Congress conveyed 1,352 acres of the total 1,528 acre former military property to Stanislaus County in 2004 pursuant to Public Law 106-82. Since that time, the County has embraced the opportunity to revitalize the County's economy through the reuse of the former airfield to the benefit County residents and the region as a whole. Conveyance of the remaining 176 acres is anticipated to occur after remediation of the remaining acreage is completed.**

## **WATER, PIPE AND UTILITY CONVEYANCE SYSTEMS**

Stanislaus County is threaded with a network of waterways, pipe and utility lines used to transport oil, natural gas, water, and electrical energy. To evaluate the circulation system, it is important to consider all forms of transport including those forms which move commodities through fixed systems.

### **Waterways**

The following are important natural and constructed waterways located within Stanislaus County:

**California Aqueduct.** The California Aqueduct, which begins about 30 miles east of San Francisco and passes through Stanislaus County parallel to Interstate 5, terminates near Riverside. It is the principal water conveyance facility of the State Water Project.

The principal purpose of the California Aqueduct is the delivery of water from a normally abundant source in Northern California to arid portions of Southern California to be used for irrigation and domestic purposes.

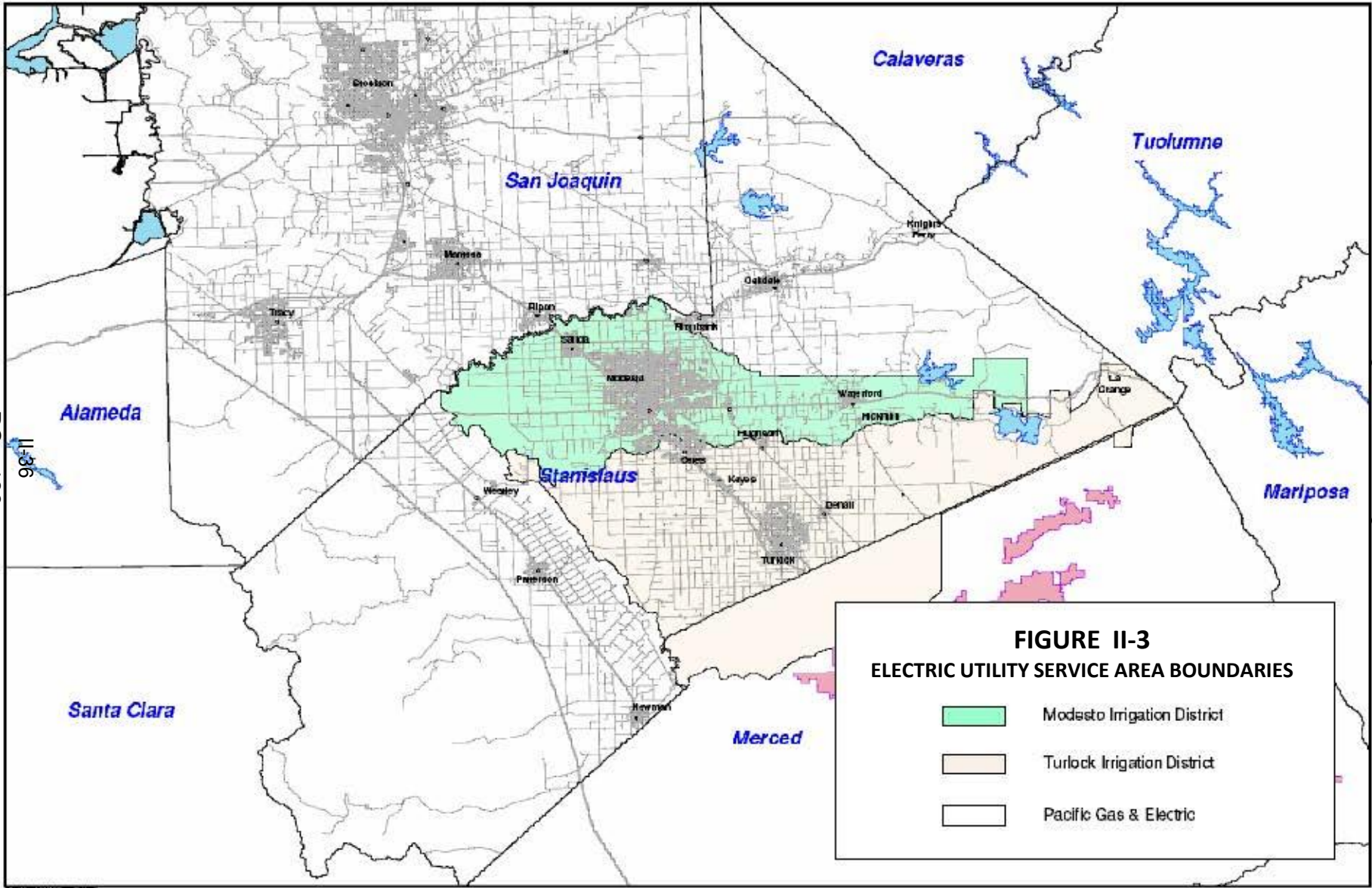
**Delta-Mendota Canal.** The Delta-Mendota Canal is a federally owned project which was developed to aid flood control, enhance recreation and increase irrigation alternatives. This facility originates in San Joaquin County. It parallels I-5 and ends at the Mendota Slough in Fresno County. Several water districts within Stanislaus County contract with the Bureau of Reclamation for irrigation water from this canal.

**Hetch-Hetchy.** The Hetch-Hetchy Aqueduct is an underground, enclosed system carrying domestic water from the Hetch-Hetchy Reservoir through the northern portion of the County, across the valley to San Francisco, as well as neighboring communities in most of San Mateo County and parts of Santa Clara and Alameda counties. Farmers have been given permission to farm within the Hetch-Hetchy right-of-way. However, no permanent structures are permitted within the right-of-way.

**Irrigation Canals.** There are many miles of canals and ditches that distribute irrigation water to the farmlands of Stanislaus County. Presently, there are nineteen (19) irrigation and/or water districts formed to use and maintain this system.

### **Electric**

The service area boundaries for the three major electric utility providers-Pacific Gas and Electric, Modesto Irrigation District, and Turlock Irrigation District- are shown in Figure II-3. Major electrical transmission lines and substations located in Stanislaus County may be found by contacting the California Energy Commission.



**FIGURE II-3**  
**ELECTRIC UTILITY SERVICE AREA BOUNDARIES**

- Modesto Irrigation District
- Turlock Irrigation District
- Pacific Gas & Electric

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**Gas and Oil**

Pipelines within Stanislaus County carry natural gas and crude oil, generally along highways and railroad lines.

The crude oil pipelines traversing Stanislaus County are owned by Tosco, Kinder Morgan Energy Partners, Shell Pipeline, and Chevron Pipe Line companies. These lines run parallel to Interstate 5, State Route 33 and State Route 99.

Natural gas lines that traverse the County are owned and operated by Pacific Gas and Electric Company. The major supply line parallels Interstate 5. This line transports natural gas produced elsewhere to Stanislaus County residents and beyond.

**AIR QUALITY**

Stanislaus County falls within the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The attainment status in Stanislaus County for major criteria air pollutants are summarized in Table 2-56.

**Table 2-56  
San Joaquin Valley Air Quality Attainment Status**

| <b>Major Criteria Air Pollutant</b>                                       | <b>State Designations</b>             | <b>Federal Designation/<br/>Classification</b> |
|---|---------------------------------------|--|
| <del>Ozone (O<sub>3</sub>): 1 hour</del>                                  | <del>Nonattainment</del>              | <del>Nonattainment/Extreme</del>               |
| <del>Ozone (O<sub>3</sub>): 8 hour (federal only)</del>                   | <del>-----</del>                      | <del>Nonattainment/Serious</del>               |
| <del>Particulate Matter-- finer than 10 microns (PM<sub>10</sub>)</del>   | <del>Nonattainment</del>              | <del>Nonattainment/Serious</del>               |
| <del>Particulate matter-- finer than 2.5 microns (PM<sub>2.5</sub>)</del> | <del>Nonattainment</del>              | <del>Nonattainment</del>                       |
| <del>Carbon Monoxide (CO)</del>   | <del>Attainment</del>                 | <del>Attainment or Unclassified</del>          |
| <del>Nitrogen Dioxide (NO<sub>2</sub>)</del>                              | <del>Attainment</del>                 | <del>Attainment or Unclassified</del>          |
| <del>All others</del>   | <del>Attainment or Unclassified</del> | <del>Attainment or Unclassified</del>          |

An air quality analysis of the improvements contained within this Circulation Element is provided in Chapter 2 of the "Stanislaus County General Plan - Support Documentation." The federal Clean Air Act and federal transportation conformity rule require each transportation improvement program to demonstrate conformance with the federal air quality attainment plans. This analysis demonstrates that the regional emissions generated by the Circulation Element are consistent with the assumptions built into those air quality attainment demonstrations. The County is committed to implementing transportation control measures that reduce emissions generated by on-road and off-road mobile sources. These control measures are adopted by resolution of the Board of Supervisors from time to time. Examples of the types of adopted control measures are expansion of public transit systems, transit incentives, adaptive signal timing, internet education, and transit amenities such as bus pullouts and bike racks on buses.



## IMPLEMENTATION PROGRAMS

The goals, policies, and implementation measures of the Circulation Element are carried out through a variety of implementation programs. Implementation programs fall into two broad categories, those related to new development and those related to the construction of improvements on the system. Major transportation improvements are funded from a variety of State, federal and local revenue sources.

### **Implementation Programs Applicable to New Development**

**Zoning Ordinance.** The Zoning Ordinance establishes structure setbacks from roadways for all zoning districts in the County. All structures are required to be set back in conformance with Official Plan Lines, where applicable. Special setback requirements for certain roadways are also identified. Vision clearance areas are required at intersections **and at driveway entrances** to ensure that no obstruction is placed, built, parked or allowed to grow such that it blocks the view of a motor vehicle driver. **The Zoning Ordinance also specifies the number of parking spaces required for various types of expanding or new development.**

**Subdivision Ordinance.** The Subdivision Ordinance establishes design standards for minimum right-of-way road widths, intersection geometrics, road grades, part-width streets, access and curb, gutter and sidewalk. Procedures for establishing fees for the construction of bridges and major thoroughfares, authorized under Government Code Section 66484, are also provided in the Subdivision Ordinance.

**Standards and Specifications.** The Standards and Specifications Manual establishes the standards for all work performed within the public right-of-way, including roadway pavement sections, road cross sections, driveway access, sidewalks, bicycle facilities, and bus turnouts, and certain on-site improvements, such as parking.

**Traffic Transportation Impact Studies.** **Transportation Traffic** impact studies are performed to determine the impact that a proposed development proposal could have on the transportation system. These studies help to determine the significance of the impact, the nexus between the proposed development and the need for a transportation improvement, the type of improvement required, and, in some cases, the contribution that the development project needs to make toward the transportation improvement. Accepted **transportation traffic** engineering principles are applied in preparing these reports. For impacts on State Highways, Caltrans has adopted formal procedures for performing these studies, called the "Guide for the Preparation of Traffic Impact Studies." The Caltrans procedures are to be followed whenever it is determined that the Caltrans traffic generation thresholds have been exceeded.

**All modes of transportation shall be considered in Transportation Impact Studies including the operational and safety impacts of vehicle traffic, bicycle/pedestrian traffic, and transit systems. Impacts shall be mitigated with appropriate improvements to minimize the impacts of the proposed development.**

**State legislative changes have prohibited vehicular delay, or Level of Service (LOS), from being used as a metric to define a significant impact under CEQA law, and have shifted emphasis of transportation analysis to transit-oriented design, the reduction of vehicle trips, and safety. However, the Highway Capacity Manual (HCM) can still be used to determine Level of Service to evaluate impacts of new developments on the transportation system. Although other factors, such as safety and air quality, will be considered in environmental review, Stanislaus County Policy still maintains a goal of a minimum Level of Service for all modes of transportation.**

## **Improvement Programs**

**Funding.** Funding for improvements to the county's transportation system is generated primarily through State and federal gasoline and diesel fuel taxes paid at the pump by the driving public. These funds are returned to counties and cities throughout the State of California through a variety of State, federal and local programs. Local governments directly receive roughly one-third of the funding from these sources. The remaining funds are distributed either by Caltrans or the Stanislaus Council of Governments, the regional transportation planning agency for Stanislaus County. An increasingly important source of funding comes from public facility fees, dedications, and improvements required from new development. Consideration ~~is being~~ **may be** given to the enactment of a half-cent sales tax to fund transportation improvements. This **potential** sales tax would be collected countywide and administered by a transportation authority, an agency designated by the cities and County of Stanislaus.

**Capital Improvement Program.** ~~Each year,~~ **T**he County prepares a multi-year, prioritized list of capital projects in its Capital Improvement Program. This list includes those transportation improvement projects that are required to meet the needs of the County in the short-and long-term. The program is reviewed **annually** for consistency with the General Plan as required under Section 65103(c) of the Government Code. The Capital Improvement Program identifies major projects, exceeding \$100,000 in cost, ~~that~~ **which** are being implemented by the County and divides those projects into prioritized groups based on funding availability and on the planning status of each project. Projects included in the Capital Improvement Program are funded by a combination of State, federal, and local sources, including development fees collected through the Public Facility Fee program. Modifications to the Plan are made **annually** as a normal part of the County's budgeting process and do not require amendment of the General Plan.

## GOALS, POLICIES AND IMPLEMENTATION MEASURES

### GOAL ONE

Provide **and maintain** a **transportation** system ~~of roads and roads~~ throughout the County **for the movement of people and goods** that **also** meets land use **and safety** needs **for all modes of transportation**.

### POLICY ONE

Development will be permitted only when facilities for circulation exist, or will exist as part of the development, to adequately handle increased traffic **and safety concerns needs for all modes of transportation**.

### IMPLEMENTATION MEASURES

1. Future road rights-of-ways shall be protected from development through the adoption and implementation of Official Plan Lines, where necessary (see Table ~~2-3II-4~~). The County shall utilize Official Plan Lines provided by cities for roadways that fall within the cities' sphere of influence.  
**Responsible Departments: Public Works, Planning**
2. Dedication and improvement of right-of-way to conform to the Official Plan Line or ultimate right-of-way line shall be required as a condition of development. Generally, this is accomplished through administration of the Subdivision Ordinance and Building Code requirements.  
**Responsible Departments: Public Works, Planning**
3. Developers will construct or pay the cost of new roadways, **including non-motorized elements**, necessary to serve the development **of all land uses** and to mitigate impacts to the existing roadways caused by the development.  
**Responsible Department: Chief Executive Office, Public Works, Planning**
4. The County shall ensure that new development pays its fair share of the costs of circulation improvements, **including non-motorized modes**, through a combination of public facility fees, ~~traffie~~ **transportation** impact fees, and other funding mechanisms. The total cost of required improvements shall be paid for by new development.  
**Responsible Departments: Chief Executive Office, Public Works, Planning**
5. The circulation systems of development proposals shall be reviewed **and approved** to ensure **there are** no adverse effects to adjoining land **and the circulation system**.  
**Responsible Departments: Public Works, Planning**
6. **Development proposals shall identify and mitigate, at the developers sole cost, all potential operations and safety impacts to the circulation system.**  
**Responsible Departments: Public Works, Planning**

76. To identify the potential impacts of new development on ~~traffic~~ transportation service levels, the County ~~shall~~ **may** require the preparation of a **traffic transportation** impact study at the sole expense of the developer. ~~for developments determined to be large enough to have a potentially significant impact on traffic. As appropriate, the study may be required to follow the Caltrans' "Guide for the Preparation of Traffic Impact Studies" and/or other procedures specified by the Department of Public Works.~~  
**Responsible Departments: Public Works, Planning**
87. The County will require that newly created parcels will either have frontage on a County-maintained road or access will be provided as required by County Code.  
**Responsible Departments: Public Works, Planning**
98. Unless an ~~Subdivision Ordinance~~ exception to the **current Public Works Standards and Specification** is granted, no public or private road, **which serves more than one parcel**, shall be altered in such a way that would create a cul-de-sac or dead end street longer than 500 feet.  
**Responsible Departments: Public Works, Planning**
109. Access to Expressways, ~~and Majors~~ **Principal & Minor Arterials and Major Collectors** shall be provided in accordance with the road classification definition, except that all existing driveway access and parking approved by the County may remain until otherwise determined by the Department of Public Works. As development occurs, one driveway with right-in, right-out access only may be provided to an original parcel created, or vested, prior to the adoption of a corridor-specific **access plan. Reciprocal access easements and driveways shall be provided when feasible to minimize the number of existing access driveways.** ~~onto major collectors and arterials. resolution (such as Resolution 2002-507 for the State Route 219 from SR 99 to SR 108 adopted on June 25, 2002) or the Focused General Plan Amendment, GPA 2004-03 (April 18, 2006) after the Department of Public Works determines that no acceptable alternative access can be provided and that providing access would not adversely impact traffic safety.~~  
**Responsible Departments: Public Works, Planning**
1110. The County will consider the recommendations of the State Route 99 Task Force to enhance the visual attractiveness of the State Route 99 and major gateways into the County in developing its standards for new development.  
**Responsible Departments: Public Works, Planning**
1211. The Subdivision Ordinance, Zoning Ordinance, and County Standards and Specifications shall be modified to conform with the definitions and requirements of this element ~~by March 2007.~~  
**Responsible Departments: Public Works, Planning**

## POLICY TWO

**The** Circulation systems shall be designed and maintained to promote **safety by combining multiple modes of transportation into a single, cohesive system.** ~~and minimize traffic congestion.~~

## IMPLEMENTATION MEASURES

1. The County shall maintain LOS ~~GD~~ or better for all County roadways (**Daily LOS**) and **LOS C or better** at intersections (**Peak Hour LOS**), except, within the sphere of influence of a city that has adopted a lower level of service standard, the City standard shall apply. The County may ~~allow~~ ~~adopt~~ either a higher or lower level of service standard for roadways and intersections within urban areas such as Community Plan areas, but in no case shall the adopted LOS fall below LOS D.  
**Responsible Departments: Public Works, Planning**
  
2. The County will annually review and update its transportation funding mechanisms and, as necessary, adjust its traffic impact fee in compliance with Section 66000 of the Government Code to ensure that adequate funds are collected from local, State, and federal sources to implement improvements required to maintain the County's level of service standard on all County roadways. ~~Within six (6) months of adopting the Focused General Plan Update (April 18, 2006), the County shall prepare cost estimates for the State Highway projects identified in this Circulation Element. As needed, the County will develop and adopt the appropriate impact fees to address capacity and safety elements of the intensification of land uses.~~  
**Responsible Departments: Chief Executive Office, Public Works**
  
3. The County will work with StanCOG and the cities to monitor the performance of the County's circulation system and implement improvements as required by the State-mandated Congestion Management **System (CMS) Program**.  
**Responsible Departments: Public Works, Planning**
  
4. The County will work with StanCOG and the cities to identify and secure funding for improvements to the regional and local circulation system.  
**Responsible Departments: Chief Executive Office, Public Works, Planning**
  
5. The County shall evaluate the circulation system and recommend amendments a minimum of once every five years.  
**Responsible Departments: Public Works, Planning**
  
6. The County will work with staff of the nine cities, StanCOG and Caltrans to establish more coordinated standards and routes for Expressways, **Majors Principal & Minor Arterials**, and **Major & Minor** Collectors that cross jurisdictional lines.  
**Responsible Departments: Chief Executive Office, Public Works, Planning**
  
7. Within the spheres of influence of any city, roadway improvements, dedications, building setbacks and road reservations shall meet the development standards of the city consistent with the Spheres of Influence Policy in the Land Use Element of the General Plan, except in those areas subject to an individual city/county agreement. These requirements may change from time-to-time through the adoption or revision of local land use plans or standards. To ensure consistency with a city's development standards, additional right-of-way may be required to meet the standards of that city. Where design and access requirements of a city differ from than those established by the County, development shall be required to meet the standards of the city. The County will consult with the city prior to the construction of transportation improvements within the sphere of influence to ensure consistency with the standards of that city.  
**Responsible Departments: Public Works, Planning**

8. Private roadways in areas of the County protected by the California Department of Forestry and Fire Protection shall be designed consistent with the standards of that agency, the local fire protection district and the Department of Public Works.  
**Responsible Departments: Public Works, Consolidated Fire, Planning**
9. Street and road standards proposed in any new development that differ from those established in the latest County's Standards and Specifications shall be approved by the Department of Public Works, and shall comply with nationally recognized standards, such as the Institute of Transportation Engineers, the American Association of State Highway and Transportation Officials, or Transportation Research Board, or other standard approved by the Department of Public Works that is based upon adequate research and testing.  
**Responsible Department: Public Works**
10. Traffic control devices (e.g., traffic signals, roundabouts), traffic calming, and other transportation system management techniques shall be utilized to control the flow of traffic, improve traffic safety, and minimize delays.  
**Responsible Department: Public Works**
11. On-site circulation among adjacent parcels shall include shared driveways and reciprocal access easements to limit the number of egress points onto a public road.  
**Responsible Department: Public Works, Planning, Planning Commission**
12. Development shall be designed to provide open street patterns, with multiple points of ingress and egress, to facilitate emergency response, to minimize traffic congestion, and to facilitate use by diverse modes of transportation.  
**Responsible Department: Public Works, Planning, Planning Commission**
13. Promote the transformation of major transportation corridors into boulevards that are attractive, comfortable, and safe for pedestrians by incorporating wide sidewalks to accommodate pedestrian traffic; amenities and landscaping; on-street parking between sidewalks and travel lanes; enhanced pedestrian street crossings; buildings located at the back of sidewalk; building entrances oriented to the street; transparent ground floor frontage; street trees and furnishings; and pedestrian-scale lighting and signage.  
**Responsible Department: Public Works, Planning**
14. A strategy plan should be prepared that includes the identification of areas and/or projects to which new multi-modal transportation guidelines shall apply. New guidelines shall identify strategies for creating communities that increase the convenience, safety and comfort of people using bicycle, pedestrian and public transit facilities. Existing policies and standards, such as landscaping, parking, and building setback requirements, may require variations on a case by case basis, specifically in Central Business Districts.  
**Responsible Departments: Public Works Transit Division, Planning**



## POLICY THREE

The County's Capital Improvement Program (CIP) shall be consistent with the General Plan. Section 65103(c) of the California Government Code states that the Capital Improvement Program shall be periodically reviewed. This review ensures that capital improvements are coordinated with land use policies stated in the General Plan.

### IMPLEMENTATION MEASURES

1. The CIP shall be reviewed ~~annually~~ by the Planning Commission for conformity with the General Plan.  
**Responsible Departments: Chief Executive Office, Public Works**
2. The Department of Public Works shall prepare and present a report on public works projects in the County **on a bi-annual basis** ~~at least once a year~~, consistent with Section 65401 of the Government Code.  
**Responsible Department: Chief Executive Office, Public Works**
3. Roadway, bicycle, pedestrian, **and transit, and aviation** improvements shall be included in the Capital Improvement Program, as appropriate, to implement the policies of this element.  
**Responsible Department: Chief Executive Office, Public Works**

## POLICY FOUR

The circulation system shall provide for road**way**s in all classifications (~~Freeway, Expressway, Major Collector, Local, Minor and Private~~) as necessary to provide access to all parts of the County and shall be expanded or improved to provide acceptable **accessibility and mobility levels of service** based on anticipated land use.

### IMPLEMENTATION MEASURES

1. As required by **Federal Transportation Law**, the Stanislaus ~~County~~**Council of Governments shall maintain and prepare a Congestion Management Program Process (CMP)**. ~~The County CMP shall identify alternative strategies such as travel demand management (TDM), traffic operational improvements, public transit options, Intelligent Transportation System (ITS), Non-motorized alternatives (bicycle and pedestrian) and smart growth alternative land use strategies as alternatives to manage congestion. Stanislaus County shall follow the guidance and strategies set forth in the CMP.~~ ~~will require applicants for proposed General Plan amendments that would generate 1,000 or more average daily vehicle trips to analyze their potential impacts on the designated CMP system of state highways and principal arterials.~~  
**Responsible Departments: StanCOG, Public Works, Planning**
2. ~~As required by the Stanislaus County Congestion Management Program (CMP) and the city-county agreements, the County will work with StanCOG to prepare an annual cumulative traffic impact analysis of all general plan amendments approved by the cities and the County, focusing on potential impacts on the designated CMP system of State Highways and principal arterials. This analysis shall be used to amend the County's Public Facility Fee to meet the adopted level of service standard, as appropriate.~~  
~~**Responsible Departments: Chief Executive Office, Planning, Public Works**~~  
~~**Responsible Agency: StanCOG**~~

~~3. The County shall develop procedures for conducting traffic impact studies consistent with those adopted by Caltrans and the Stanislaus Council of Governments.~~

~~**Responsible Department: Public Works**~~

**2. Transportation facilities will be adequately designed, developed and maintained to provide for current and future transportation needs to protect public health, safety and welfare.**

**Responsible Department: Public Works, Planning**

## **POLICY FIVE**

Transportation requirements **shall be considered during planning, design and construction** of commercial and industrial development **to address safety, mobility and accessibility needs.** ~~shall be considered in all planning, design, construction, and improvements.~~

## **IMPLEMENTATION MEASURES**

1. Roadways constructed in zoning districts that allow industrial and commercial uses shall be designed and constructed to accommodate truck traffic. The minimum roadway in commercial zones shall be a ~~60-foot~~ **Minor Collector (Urban/Rural)** and a ~~70-foot~~ **Minor Collector (Industrial)** shall be the minimum required right-of-way width in industrial zones.

**Responsible Department: Public Works**

2. Prior to approving new industrial and commercial development, provisions will be made to ensure that roadways providing primary access to these developments from Interstate and State Highways are designed and constructed to the standards necessary to accommodate truck traffic.

**Responsible Department: Public Works**

3. Industrial and commercial development shall be planned so that ~~truck vehicle~~ **access on local roadways** through residential areas is avoided.

**Responsible Departments: Public Works, Planning**

4. Specific Plans as defined in Government Code Section 65450 through 65457 shall be encouraged.

**Responsible Department: Planning**

5. Off-street truck parking standards shall be developed to ensure that adequate off-street parking is provided in new or expanding industrial and commercial development. Commercial developments serving travelers on Highway 99, Interstate 5 or other ~~routes~~ **roadways** carrying substantial truck traffic shall be required to include sufficient truck parking in their off-street parking plans and encouraged to provide facilities to accommodate long-term truck parking. Zoning Ordinance provisions for Off-Street Parking Requirements and the Standards and Specifications Manual shall be amended, as necessary, ~~by March 2007~~ to require truck parking as appropriate in new commercial and industrial developments.

**Responsible Departments: Public Works, Planning**

6. On-street truck parking shall be discouraged where such parking restricts adequate sight distances, detracts from the visual aesthetics of the area, or poses a potential hazard to motorists, bicyclists, or pedestrians.

**Responsible Departments: Public Works, Planning**

**GOAL TWO**

~~Provide a safe, comprehensive, and coordinated transportation system that includes a broad range of transportation modes.~~

**POLICY SIX**

The County shall strive to reduce motor vehicle emissions and vehicle **miles traveled (VMT) trips** by encouraging the use of alternatives to ~~the~~ single occupant vehicles.

**IMPLEMENTATION MEASURES**

1. The use of alternative modes of transportation will continue to be encouraged by participating in programs to promote walking, bicycling, ridesharing, and transit use for commuting and recreation.  
**Responsible Departments:** ~~Transit Manager~~/Public Works, Planning
2. The County will continue to work with StanCOG, Caltrans, and the cities to identify and secure funding for the development and improvement of bikeways, pedestrian pathways, park-and-ride facilities, transit systems, and other alternatives to the single-occupant vehicles.  
**Responsible Departments:** Chief Executive Office, ~~Transit Manager~~/Public Works
3. Facilities to support the use of, and transfer between, alternative modes of transportation (i.e., pedestrian, rideshare, bicycle, bus, **rail** and ~~train~~ **aviation**) shall be provided in new development.  
**Responsible Departments:** Public Works, Planning
- ~~4. A trip reduction and travel demand ordinance shall be developed to promote the use of alternative modes and ensure that adequate facilities are provided in new development to support the use of alternatives to the single-occupant vehicle. This ordinance may be combined with pedestrian-oriented Development (POD) and/or transit-oriented design (TOD) guidelines specified under Policies Seven and Eight.  
**Responsible Departments:** Planning, ~~Transit Manager~~/Public Works Transit Division~~
45. The County will continue to work with the Stanislaus Council of Governments and the San Joaquin Valley Air Pollution Control District to develop and implement transportation control measures to improve air quality through reduction in vehicle trips and vehicle miles of travel.  
**Responsible Departments:** Chief Executive Office, ~~Transit Manager~~/Public Works, Planning
56. Developers will construct or pay the cost of new pedestrian pathways, bikeways, rideshare facilities, transit amenities, and other improvements necessary to serve the development and to mitigate impacts to the existing circulation system caused by the development.  
**Responsible Departments:** ~~Transit Manager~~/Public Works, Planning

67. The county shall ~~convert to clean fuels~~ **continue using Compressed Natural Gas (CNG) or another alternative energy source in its** fleet vehicles ~~when possible~~ and **will** pursue special grants and funding ~~sources to facilitate this conversion to offset the costs of continued-use of CNG in County-owned buses.~~

**Responsible Departments:** ~~Transit Manager/Public Works~~ **Transit Division**

## POLICY SEVEN

Bikeways and pedestrian facilities shall be designed to provide **safe and** reasonable access from residential areas to major bicycle and pedestrian traffic destinations such as schools, recreation and transportation facilities, centers of employment, and shopping areas.

## IMPLEMENTATION MEASURES

1. Bikeways shall be considered and implemented in accordance with the StanCOG ~~Regional Bicycle Action Plan~~ **Non-Motorized Transportation Plan** and adopted Community Plans or Specific Plans when constructing or improving the roadway system in the unincorporated area outside the spheres of influence of the cities.  
**Responsible Departments:** **Public Works, Planning**
2. Within the sphere of influence of a city, bikeways and pedestrian facilities and amenities shall be provided in accordance with the applicable city's general plan and development standards.  
**Responsible Departments:** **Public Works, Planning**
3. Facilities to safely move, and support the use of, bicycles, pedestrians, transit and ridesharing shall be considered and implemented in all new development and roadway construction.  
**Responsible Departments:** **Public Works, Planning**
4. Class I bicycle and multi-use paths, ~~such as the "Highway 108 Scenic Corridor Multi-Purpose Trail Plan,"~~ shall be considered to provide connectivity between major origins-destinations or to major recreational areas when on-road provisions for bicycle traffic cannot be accommodated or no alternative roadway alignment provides adequate connectivity.  
**Responsible Departments:** **Public Works, Planning**
5. ~~In conjunction with the next comprehensive update of the General Plan, the County shall consider incorporating a bicycle master plan as a component of the Circulation Element.~~  
**Responsible Departments:** **Planning, Public Works**
- 5-6. To safely accommodate bicycle traffic, adequate pavement shoulder and/or striping shall be planned and implemented ~~for Expressways, Major, and Collector roads, and, in agricultural areas, on Local roads~~ when constructing new roadways or implementing major rehabilitation projects in accordance with the County Standards and Specifications, the Caltrans Highway Design Manual, or other nationally recognized standard.  
**Responsible Departments:** **Public Works, Planning**
- 6-7. Whenever a roadway is resurfaced or restored, adequate pavement shoulder and/or striping will be considered to safely accommodate bicycle travel in accordance with the County Standards and Specifications, the Caltrans Highway Design Manual, or other nationally recognized standard, where adequate right-of-way exists.  
**Responsible Departments:** **Public Works, Planning**

- ~~7.-8.~~ Federal funds, special grants, and other sources of funding shall be pursued for the development and improvement of bikeways and pedestrian pathways.

***Responsible Departments: Public Works***

- ~~9.~~ ~~Pedestrian-oriented Design (POD) guidelines shall be prepared which will include the identification of areas and/or projects to which POD guidelines shall apply. POD guidelines shall identify strategies for creating communities that increase the convenience, safety and comfort of people walking and bicycling. POD guidelines may be combined with transit-oriented design (TOD) guidelines specified under Policy Eight.~~

~~***Responsible Departments: Planning, Public Works***~~

## **POLICY EIGHT**

Promote public transit as a viable transportation choice.

### **IMPLEMENTATION MEASURES**

1. ~~Continue to operate an inter-city transit system and cooperate with other agencies and cities~~ Continue **to operate existing transit systems and coordinate with other County transit operators** to provide public transit serving Stanislaus County.  
***Responsible Departments: Transit Manager/Public Works Transit Division***
2. ~~Where appropriate, new development shall include provisions for connecting to or expansion of existing and/or planned public transit systems.~~ **The County shall continue to work with the Stanislaus Council of Governments (StanCOG) to seek funding to market and promote rideshare programs and where possible, encourage all County employees to use public transit to commute to work.**  
***Responsible Departments: Transit Manager/Public Works Transit Division, Planning***
3. Ensure that provisions are made in proposed development for access to current and future public transit services. In particular, continuous segments of walls or fences should not impede pedestrian access to ~~collectors, major, or e~~Expressways, **Principal and Minor Arterials, and Major and Minor Collectors** with transit service.  
***Responsible Departments: Public Works, Planning***
4. Where appropriate, new development projects shall **promote the coordination and continuity of all transportation modes and facilities, including park and ride facilities at major activity centers.** ~~include bus turnouts and shelters and/or park and ride lots~~  
***Responsible Departments: Transit Manager/Public Works Transit Division, Planning***
5. ~~Where appropriate, new development projects shall include bus turnouts and site improvements associated with bus stop accessibility for persons with disabilities, including curb cuts for wheel chair access. Where feasible, developments should be encouraged along established or proposed transit routes. The costs associated with site improvements shall be paid by the developer.~~ **Where appropriate, new development projects shall include bus turnouts and site improvements associated with bus stop accessibility for persons with disabilities, including curb cuts for wheel chair access. Where feasible, developments should be encouraged along established or proposed transit routes. The costs associated with site improvements shall be paid by the developer.**  
***Responsible Departments: Public Works, Planning***
6. ~~Where possible, coordinate public transportation with land use planning, transportation planning and air quality policies such that transit investments are complementary to land use planning and air quality policies.~~ **Where possible, coordinate public transportation with land use planning, transportation planning and air quality policies such that transit investments are complementary to land use planning and air quality policies.**  
***Responsible Departments: Public Works, Planning***

~~5. Transit-oriented design (TOD) shall be prepared that include the identification of areas and/or projects to which TOD guidelines shall apply. TOD guidelines shall identify strategies for creating communities that increase the convenience, safety and comfort of people using public transit. TOD guidelines may be combined with POD guidelines specified under Policy Seven.~~

~~**Responsible Departments: Planning, Transit Manager/Public Works Transit Division**~~

**76.** Financing mechanisms shall be investigated to recover the cost of providing transit service and infrastructure to support new development.

**Responsible Departments: ~~Transit Manager~~/Public Works Transit Division, Planning**

**8.** The County shall encourage infill development of vacant parcels and redevelopment projects that will align with and improve the overall effectiveness of the public transit system.

**Responsible Departments: Public Works Transit Division, Planning**

**9.** Increase transit use through higher-frequency service of at least 15-minute headways in downtown areas and along major transportation corridors. Transit and land use will be interconnected to support increased ridership.

**Responsible Department: Public Works, Planning**



**GOAL THREETWO**

Maintain a **safe**, balanced and efficient transportation system that facilitates inter-city and interregional travel and goods movement.

**POLICY NINE**

The County shall promote the development of **safe** inter-city and interregional transportation facilities that more efficiently moves goods and freight within and through the region.

**IMPLEMENTATION MEASURES**

1. The County will coordinate with the Stanislaus Council of Governments (StanCOG), Caltrans, and other appropriate agencies in the implementation of the Regional Transportation Plan, including the development of a system of State Highways and expressways to allow more efficient people and goods movement.  
**Responsible Departments: Chief Executive Office, Public Works, Planning**
2. The County will continue to work with Caltrans, StanCOG, and other agencies to investigate ways to provide increased inter-city and interregional passenger rail service to Stanislaus County.  
**Responsible Departments: Chief Executive Office, Public Works, Planning**
3. The County shall continue to encourage and support the development of high-security, off-street parking for ~~trucks~~ **commercial vehicles**.  
**Responsible Departments: Chief Executive Office, Public Works, Planning**
4. The County shall investigate the need for new or expanded grade-separated railroad crossings and river crossings for high volume ~~routes~~**roadways** and expressways.  
**Responsible Departments: Chief Executive Office, Public Works, Planning**
5. The County will continue to support the development of public use airports consistent with the airport master plans developed for the Oakdale Municipal Airport and the Modesto City-County Airport.  
**Responsible Departments: Chief Executive Office, Public Works, Planning**
6. Consistent with the 1989 Economic Strategic Plan and the 2001 Reuse Plan, **and subsequent studies**, the County will continue to plan the development of the **former** Crows Landing Air Facility, including the development of General Aviation **airport** ~~air-service~~ and ~~associated~~ **aviation-compatible** business park and industrial development.  
**Responsible Departments: Chief Executive Office, Public Works, Planning**
- ~~7. The County will coordinate and participate with the San Joaquin Valley Partnership, the Stanislaus Council of Governments, and Caltrans to evaluate the possibility of designating the San Joaquin Valley portion of State Route 99 as part of the Federal Interstate System.  
**Responsible Departments: Chief Executive Office, Public Works**~~

## **POLICY TEN**

The Airport Land Use Commission Plan and County Airport Regulations (Chapter 17 of the County Code) shall be updated as necessary, maintained and enforced.

## **IMPLEMENTATION MEASURE**

1. Continue to implement the strategies identified under Policy Twelve of the Safety Element.  
***Responsible Departments: Planning, Airport Land Use Commission***

**GOAL THREE**

**Provide and manage parking to accommodate vehicle usage while minimizing the impacts of excessive parking supply.**

**POLICY ELEVEN**

**Seek to implement more flexible parking requirements to reduce the amount of land devoted to parking and to make alternative modes of transportation more accessible.**

**IMPLEMENTATION MEASURE**

- 1. Update the Parking Ordinance to allow more flexibility in usage of on-street parking.**
- 2. Update the Parking Ordinance to allow the use of shared parking facilities.**
- 3. Encourage the identification of priority parking areas for vanpools, carpools, and energy efficient and low-pollution vehicles, including consideration of recharge stations for electric vehicles in all Commercial and Business Park designated development projects with 100 or more employees.**

***Responsible Departments: Public Works, Planning, Planning Commission, Board of Supervisors***

## Chapter **Three 3**

# CONSERVATION/OPEN SPACE ELEMENT

## INTRODUCTION

The Conservation/Open Space Element of the Stanislaus County General Plan emphasizes the conservation and management of natural resources and the preservation of open space lands (any parcel or area of land or water which is essentially unimproved). The element: (1) promotes the protection, maintenance, and use of the County's natural resources, with special emphasis on scarce resources and those that require special control and management; (2) prevents wasteful exploitation, destruction, and neglect of natural resources; (3) recognizes the need for natural resources to be maintained for their ecological values as well as for their direct benefit to people; (4) preserves open space lands for outdoor recreation including scenic, historic and cultural areas; and (5) preserves open space for public health and safety including areas subject to landslides, flooding, and high fire risk and areas required for the protection of water and air quality. ~~Information on the various natural, cultural, recreational and aesthetic resources, along with safety issues are discussed below in Chapter 3 of the "Stanislaus County General Plan Support Documentation."~~

**The Goals, policies and implementation measures of the Conservation/Open Space Element cover the various natural, cultural, recreational and aesthetic resources found throughout the County. Complementary goals, policies, and implementation measures, along with support information, for these resources are also included in the Land Use, and Agricultural Elements of the General Plan. Additional background information on resources not discussed in other elements of the General Plan is provided below:**

### **Fish and Wildlife Inventory**

**Numerous species of plant and animal life are found in Stanislaus County which has aesthetic, recreational, economic, scientific or educational value to the citizens of the area. Thirteen land cover types, which provide wildlife habitat, can be found in Stanislaus County. These are Oak woodland, Blue oak-foothill pine, Valley foothill riparian, Chaparral, Diablan sage scrub, Annual grassland, Vernal pool/Annual grassland complex, Freshwater emergency wetland, Riverine, Lacustrine, Agriculture, Urban, and Barren. Special-status wildlife species that have been identified occurring within Stanislaus County are primarily associated with the annual grassland/vernal pool complexes on the eastern side of the county, the riparian habitats along the San Joaquin, Stanislaus, and Tuolumne rivers, and the lands west of I-5. Critical habitat has been designated for 11 federally listed species within the limits of Stanislaus County.**

### **Parks and Trails**

**The County presently maintains several regional parks with a total acreage of 16,820 acres. These parks provide a wide variety of recreational facilities and opportunities such as picnic areas, sports fields, campsites, equestrian facilities, swimming, waterskiing, fishing, boating and barbecue pits. In addition to regional parks, Stanislaus County**

operates several neighborhood parks with a total acreage of 73 acres, in the unincorporated areas surrounding Modesto and Ceres, and in the unincorporated communities of Salida, Keyes, Grayson, and Denair.

### Historic and Cultural Sites

Within Stanislaus County, there are 20 National Registry of Historic Places listings, 5 state landmarks, and 7 points of historical interest. These records of known archaeological and historical sites are filed with the Office of Historic Preservation, Central California Information Center, California State University, Stanislaus, Turlock, California. Exact locations are kept confidential so as to protect these valuable resources. The two chief historical areas within Stanislaus County are in and around the gold rush towns of Knights Ferry and La Grange. Located in the community are a number of historic buildings considered worthy of preservation. The County, working closely with the residents of these communities, has established a historical site zone ensuring that all development within the two towns will be consistent with their historical nature.

## GOALS, POLICIES AND IMPLEMENTATION MEASURES

### GOAL ONE

Encourage the protection and preservation of natural and scenic areas throughout the County.

#### POLICY ONE

Maintain the natural environment in areas dedicated as parks and open space.

#### IMPLEMENTATION MEASURES

1. Development of County parks shall include provisions for native vegetation conservation. Rare and endangered plants will be protected consistent with state and federal law and consistent with protection standards for private development as established in this General Plan.  
**Responsible Departments: Parks and Recreation, Board of Supervisors**
2. Continue to use Williamson Act contracts as a means for open space conservation.  
**Responsible Departments: Assessor, Planning, Board of Supervisors**

#### POLICY TWO

Assure compatibility between natural areas and development.

#### IMPLEMENTATION MEASURES

1. Review zoning regulations **and landscaping requirements** for compatibility between proposed development and natural areas, **including protection from invasive plants.**  
**Responsible Department: Planning**
2. Review all development requests to ensure that sensitive areas (e.g., riparian habitats, vernal pools, rare plants) are left undisturbed or that mitigation measures acceptable to appropriate state and federal agencies are included in the project.  
**Responsible Departments: Public Works, Planning, Planning Commission, Board of Supervisors**
3. **Require Airport Land Use Commission (ALUC) review of the location, compatibility, and design of proposed parks, open space uses, and outdoor recreation areas within adopted Airport Influence Areas.**  
**Responsible Department: Planning**
4. **Discourage the establishment of conservation areas or nature preserves within adopted Airport Influence Areas.**  
**Responsible Department: Planning**



5. **Consider adoption of scenic corridors to protect and preserve natural scenic vistas located throughout the County.**  
**Responsible Departments: Parks and Recreation, Planning, Planning Commission, Board of Supervisors**

### **POLICY THREE**

Areas of sensitive wildlife habitat and plant life (e.g., vernal pools, riparian habitats, flyways and other waterfowl habitats, etc.) including those habitats and plant species listed in the General Plan Support Document or by state or federal agencies shall be protected from development **and/or disturbance.**

### **IMPLEMENTATION MEASURES**

1. Review all development requests to ensure that sensitive areas (e.g., riparian habitats, vernal pools, rare plants, flyways, etc.) are left undisturbed or that mitigation measures acceptable to appropriate state and federal agencies are included in the project.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
2. In known sensitive areas, the State Department of Fish and ~~Game~~-Wildlife shall be notified as required by the California Native Plant Protection Act; the U.S. Fish and Wildlife Service also shall be notified.  
**Responsible Department: Planning**
3. All discretionary projects that will potentially impact riparian habitat and/or vernal pools or other sensitive areas shall include mitigation measures for protecting that habitat.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
4. **All discretionary projects within an adopted Airport Influence Area (AIA) that have the potential to create habitat, habitat conservation, or species protection shall be reviewed by the Airport Land Use Commission.**  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
- ~~4~~ 5. Implementation of this policy shall not be extended to the level of an unconstitutional "taking" of property.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
6. **Any ground disturbing activities on lands previously undisturbed that will potentially impact riparian habitat and/or vernal pools or other sensitive areas shall include mitigation measures for protecting that habitat, as required by the State Department of Fish and Wildlife.**  
**Responsible Departments: Public Works, Planning, Planning Commission, Board of Supervisors**

## **POLICY FOUR**

Protect and enhance oak woodlands and other native hardwood habitat.

### **IMPLEMENTATION MEASURES**

1. Require all discretionary projects that will potentially impact oak woodlands and other native hardwood habitat, including but not limited to hardwood rangelands identified ~~in the maps in Appendix III-A~~ **by the California Department of Forestry and Fire Protection**, to include a management plan for the protection and enhancement of oak woodlands and other native hardwood habitat.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
2. Consider adoption of a tree protection ordinance to promote conservation of native trees or trees with historic significance.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**

**GOAL TWO**

Conserve water resources and protect water quality in the County.

**POLICY FIVE**

Protect groundwater aquifers and recharge areas, particularly those critical for the replenishment of reservoirs and aquifers.

**IMPLEMENTATION MEASURES**

1. Proposals for urbanization in groundwater recharge areas shall be reviewed to ensure that (1) as much water as possible is returned to the recharge area, (2) the development will not cause discharge of materials detrimental to the quality of the water, and (3) the development will not result in significant groundwater overdrafting or deterioration in quality. The Department of Environmental Resources shall require:
  - A. In those areas where groundwaters are susceptible to overdrafting, the project proponent shall perform a hydrogeological analysis and include appropriate mitigation measures in the proposal.
  - B. In those areas where groundwater quality is susceptible to deterioration or is already of reduced quality, the level of wastewater treatment shall be such that it will not cause further quality deterioration.

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

2. The Department of Environmental Resources shall identify and require control of point sources for pollutants stored, handled or disposed of on the surface of the soil or in the vadose zone that is located in the zone or aeration immediately above the groundwater level. Potential sources of pollutants to the groundwater may also include high densities of individual on-site sewage treatment units and/or the use of community package treatment plants. The Department of Environmental Resources shall require the adoption of groundwater monitoring programs for projects where hydrogeological assessments indicate the potential for groundwater deterioration is likely.

**Responsible Department: Environmental Resources**

3. **Stanislaus County shall discourage the use of ~~Eliminate reliance on~~ dry wells** as a means of street drainage in urban areas. Dry wells collect and discharge toxic, hazardous and designated contaminants into aquifers having beneficial uses. New projects shall have storm water disposal systems that: (1) are designed not to pollute receiving surface or groundwaters, and (2) which could be integrated into an area-wide groundwater recharge program whenever feasible.

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

4. ~~During the project and environmental review process,~~ Encourage new development to incorporate water conservation measures to minimize adverse impacts on water supplies. ~~Possible measures include, but are not limited to, low-flow plumbing fixtures, use of reclaimed wastewater for landscaping when feasible, and use of drought-tolerant landscaping.~~  
**Responsible Departments: Environmental Resources, Planning**
5. Continue to implement the landscape provisions of the Zoning Ordinance, which encourage drought-tolerant landscaping and water-conserving irrigation methods.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
6. During the project and environmental review process, encourage new urban development to be served by community wastewater treatment facilities and water systems rather than by package treatment plants or private septic tanks and wells.  
**Responsible Departments: Environmental Resources, Planning, Planning Commission, Board of Supervisors**

## POLICY SIX

Preserve **natural** vegetation to protect waterways from bank erosion and siltation.

## IMPLEMENTATION MEASURES

1. Development proposals **and mining activities** including or in the vicinity of waterways and/or wetlands shall be closely reviewed to ensure that destruction of riparian habitat and vegetation is minimized. This shall include referral to the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, ~~and the State Department of Fish and Game Wildlife,~~ **and the State Department of Conservation.**  
**Responsible Departments: Public Works, Planning, Planning Commission, Board of Supervisors**
2. Continue to encourage best management practices for agriculture and coordinate with soil and water conservation efforts of Stanislaus County Farm Bureau, Resource Conservation Districts, the U.S. Soil Conservation Service, and local irrigation districts.  
**Responsible Departments: Agricultural Commissioner, U.C. Cooperative Extension**

## POLICY SEVEN

New development that does not derive domestic water from pre-existing domestic and public water supply systems shall be required to have a documented water supply that does not adversely impact Stanislaus County water resources.

## IMPLEMENTATION MEASURES

1. Proposals for development to be served by new water supply systems shall be referred to appropriate water districts, irrigation districts, community services districts, the State Water Resources Board and any other appropriate agencies for review and comment.  
**Responsible Department: Environmental Resources, Planning**
2. Review all development requests to ensure that sufficient evidence has been provided to document the existence of a water supply sufficient to meet the **short and long term water** needs of the project without adversely impacting the quality and quantity of existing local water resources.  
**Responsible Departments: Environmental Resources, Planning, Planning Commission, Board of Supervisors**

## POLICY EIGHT

The County shall ~~continue and, if necessary, expand the water monitoring program of the Stanislaus County Department of Environmental Resources~~ **support efforts to develop and implement water management strategies.**

## IMPLEMENTATION MEASURES

1. The County ~~will consider applying for Community Development Block Grant Funds and other~~ **will pursue** state and federal ~~grants funding options~~ **grants funding options** to improve water ~~management resources quality~~ **management resources** in the County.  
**Responsible Department: Environmental Resources, Planning, Board of Supervisors**
2. The Department of Environmental Resources should continue to monitor groundwater quality by reviewing well water chemical and bacterial analysis results **for public water systems under the department's supervision** and **by** overseeing investigations involving soil and groundwater contamination.  
**Responsible Department: Environmental Resources**
3. **The County will coordinate with water purveyors, private landowners and other water resource agencies in the region on data collection of groundwater conditions and in the development of a groundwater usage tracking system, including well location/construction mapping (within the extent that prevailing law allows) and groundwater level monitoring, to guide future policy development.**  
**Responsible Department: Environmental Resources**
4. **The County shall promote efforts to increase reliability of groundwater supplies through water resource management tools ranging from surface water protection programs, demand management programs (conservation), continued public education programs, and expanded opportunities for conjunctive use of groundwater, surface water, and appropriately treated wastewater and stormwater reuse opportunities.**  
**Responsible Department: Public Works, Environmental Resources, Agricultural Commissioner, Public Health, Planning**

5. **The County will support and where appropriate help facilitate the formation of an integrated and comprehensive county-wide, and where appropriate regional, water resources management plan which incorporates existing water management plans and identifies and plans for management within the gaps between existing water management plans.**  
***Responsible Department: Environmental Resources, Planning***
6. **The County will cooperate with other pertinent agencies, including cities and water districts, in the preparation and adoption of a groundwater sustainability plan pursuant to the Sustainable Groundwater Management Act (SGMA) and any subsequent legislation. The County will use its regulatory authority, as appropriate, to implement the requirements of the groundwater sustainability plan.**  
***Responsible Department: Environmental Resources, Planning***
7. **The County will obtain the technical information, and develop the planning and policy needs to improve groundwater recharge opportunities and groundwater conditions in the County.**  
***Responsible Department: Environmental Resources, Planning***
8. **As information becomes available, the County will adopt General Plan changes to protect recharge areas and manage land use changes that have an impact on groundwater use and quality.**  
***Responsible Department: Environmental Resources, Planning***

## **POLICY NINE**

The County will investigate additional sources of water for domestic use.

## **IMPLEMENTATION MEASURE**

1. The County will work with irrigation and water districts, community services districts, municipal and private water providers in developing surface water and other potential water sources for domestic use.  
***Responsible Departments: Chief Executive Office, Environmental Resources, Stanislaus County Water Advisory Committee, Planning***



**GOAL THREE**

Provide for the long-term conservation and use of agricultural lands.

**POLICY TEN**

Discourage the division of land which forces the premature cessation of agricultural uses.

**IMPLEMENTATION MEASURES**

1. Use of the 40-acre or larger parcel size or agricultural Planned Developments with average residential densities equivalent to those allowed by parcel sizes of at least 40 acres shall be continued throughout most of the area designated Agriculture on the Land Use Element of the General Plan.

**Responsible Departments: Planning, Planning Commission, Board of Supervisors**

2. The County will continue to ~~offer the financial benefits of the~~ **participate in the** Williamson Act, consistent with ~~the Policies Sixteen, Implementation Measure 5~~ of the Land Use **and Agricultural Elements.**

**Responsible Departments: Assessor, Planning, Board of Supervisors**

3. The County will continue to participate in the Farmland Mapping and Monitoring Program. ~~(Comment: The major purpose of this program is to monitor conversion of the state's agricultural land to and from agricultural use, and to report that conversion annually to the legislature, local government, and the public. The program began in 1980 to supplement the land inventory and monitoring activity of the U.S. Department of Agriculture's Soil Conservation Service (SCS). Growing public concern over farmland losses in California and a low federal priority for the mapping program in our State were the basis for California's participation in the land inventory. The State's involvement in the SCS inventory program led to the passage of AB 966 in 1981. The primary purpose of the bill was to create a map inventory of the State's crop and grazing lands, and set up an ongoing monitoring system to document the quantity of land put into production and land converted to urban usage in California. As a result, three key areas of local governmental involvement in the State's Farmland Mapping and Monitoring Program are: (1) identifying farmland of local importance, (2) identifying land committed to nonagricultural use, and (3) advising the Department each year of lands which have been converted to urban use.)~~

**Responsible Departments: U.C. Cooperative Extension, Planning**

4. ~~In designated areas of agricultural land, the County will encourage clustering, or grouping together, of allowable dwelling units on relatively small parcels instead of the dispersal of such dwelling units on larger parcels. Any changes to County zoning and/or subdivision regulations to allow clustering should be submitted by staff to the Planning Commission and Board of Supervisors by June 30, 1996.~~

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

## **POLICY ELEVEN**

In areas designated "Agriculture" on the Land Use Element, discourage land uses which are incompatible with agriculture.

### **IMPLEMENTATION MEASURES**

1. All development proposals that require discretionary approval shall be reviewed to ensure that the project will not adversely affect an existing agricultural area.  
***Responsible Department: Planning, Agricultural Commissioner, Planning Commission, Board of Supervisors.***
2. The County shall continue to implement the strategies identified in the Agricultural Element to ensure that new development is compatible with agricultural uses.  
***Responsible Department: Agricultural Commissioner, Planning, Planning Commission, Board of Supervisors.***
3. The County shall continue to work with LAFCO to ensure that expansion of urban boundaries minimizes the area of conflict between urban and agricultural uses.  
***Responsible Department: Planning Department***

## GOAL FOUR

Provide for the open-space recreational needs of the residents of the County.

### POLICY TWELVE

Provide a system of local and regional parks which will serve the residents of the County. (Comment: The County should acquire future park sites in areas where growth is planned when funding is available).

### IMPLEMENTATION MEASURES

1. The County shall consider adoption of an amendment to the Subdivision Ordinance ~~by June 30, 1996~~ to require parkland dedication, ~~or~~ park in-lieu fees, **public facility fees, or other methods acceptable to the Parks Department**, to be paid by subdividers and developers.  
**Responsible Departments: Planning, Parks and Recreation, Parks Commission, Planning Commission, Board of Supervisors**
2. ~~The County Department of Parks and Recreation shall prepare and implement a plan to identify, acquire and maintain future park site locations. The parks plan should be adopted by June 30, 1996 and should address neighborhood parks and open space in urban settings as well as regional parks that serve the entire County population.~~ **The County shall continue to implement the Parks Master Plan. The Plan shall be comprehensively updated as found necessary by the Board of Supervisors.**  
**Responsible Departments: Parks and Recreation, Parks Commission, Planning, Planning Commission, Board of Supervisors**
- ~~3. The County shall adopt design standards for urban parks by June 30, 1996.~~  
~~**Responsible Departments: Parks Department, Parks Commission, Planning Department, Planning Commission, Board of Supervisors**~~
3. ~~4.~~ The County shall consider establishing appropriate funding mechanisms for park operations and maintenance, including benefit assessment districts and County Service Areas (CSAs), with appropriate exemptions included for those landowners that provide open space amenities.  
**Responsible Departments: Chief Executive Office, Treasurer-Tax Collector, Auditor-Controller, Parks and Recreation, Parks Commission, Planning, Planning Commission, Board of Supervisors**
4. ~~5~~ The County shall encourage the interconnection of recreational areas, open spaces and parks that are oriented to pedestrian and bicycle travel along public highway rights-of-way, while protecting private property **and river corridors**, to the greatest extent possible.  
**Responsible Departments: Public Works, Parks and Recreation Department, Parks Commission, Planning, Planning Commission, Board of Supervisors**

- ~~6. The County Department of Parks and Recreation will cooperate with efforts by the State Parks Department to make Henry Coe State Park more accessible to Stanislaus County residents.~~

~~**Responsible Department: Parks and Recreation**~~

5. ~~7.~~ The County shall require **dedication and improvement of parks and open space in accordance with the Stanislaus County Parks Master Plan, as amended from time to time.** ~~at least three net acres of developed neighborhood parks to be provided for every 1,000 residents.~~

**Responsible Departments: Parks and Recreation, Parks Commission, Planning, Planning Commission, Board of Supervisors**

### **POLICY THIRTEEN**

Promote the use of water reservoirs for multiple recreational purposes, where appropriate.

#### **IMPLEMENTATION MEASURES**

1. The County shall encourage the multiple uses of reservoirs as flood control devices, recreational facilities, and wildlife habitats.

**Responsible Departments: Parks and Recreation, Board of Supervisors**

2. The County shall, when funds become available, install **and maintain boating ramps facilities**, where appropriate.

**Responsible Departments: Parks and Recreation, Board of Supervisors**

3. **The County shall encourage the development of on-site resort services and accessory sales designed to enhance recreational opportunities, where appropriate.**

**Responsible Departments: Parks and Recreation, Board of Supervisors**

### **POLICY FOURTEEN**

Provide for diverse recreational opportunities such as horseback riding trails, hiking trails, and bikeways.

#### **IMPLEMENTATION MEASURES**

1. In areas where appropriate, equestrian facilities may be provided. (The County should consider equestrian facilities when developing new parks. Also, in large land subdivisions where horses are permitted, the County should encourage the development of equestrian facilities.)

**Responsible Departments: Parks and Recreation, Planning, Planning Commission, Board of Supervisors**

2. Bikeways and pedestrian paths shall be considered when constructing or improving the road and street system within the sphere of influence of cities or other urban areas, **consistent with the Non-Motorized Transportation Plan adopted by StanCOG.**

**Responsible Departments: Public Works, Planning, Planning Commission, Board of Supervisors**

## POLICY FIFTEEN

Coordinate the provision of recreation needs with other providers such as the Army Corps of Engineers, the State Resources Agency, school districts, **local cities**, river rafters, horse stable operators, and private organizations such as the Sierra Club, and Audubon Society.

### IMPLEMENTATION MEASURES

1. The County will pursue various funding options for providing recreational opportunities.  
**Responsible Departments: Parks and Recreation, Board of Supervisors**
2. The County will assume responsibility for parks, when financially feasible, dedicated to them by state or federal agencies.  
**Responsible Departments: Parks and Recreation, Board of Supervisors**
3. Prior to the issuance of any building permit on parcels fronting ~~the Stanislaus River on~~ **rivers and streams**, it shall be verified that the building site is outside of Army Corps of Engineers easements.  
**Responsible Department: Planning**
4. An inventory of recreational facilities shall be maintained for use in parks and recreation facilities planning.  
**Responsible Department: Parks and Recreation**
5. **Proposals to establish new or expanded recreational areas shall be reviewed for consistency with policies of the Safety Element when located within an adopted Airport Influence Area as a means to prevent the creation of potential wildlife strike hazards or other hazards to park users, aviators, and the traveling public.**  
**Responsible Department: Parks and Recreation**

**GOAL FIVE**

Reserve, as open space, lands subject to natural disaster in order to minimize loss of life and property of residents of Stanislaus County.

**POLICY SIXTEEN**

Discourage development on lands that are subject to flooding, landslide, faulting or any natural disaster to minimize loss of life and property.

**IMPLEMENTATION MEASURES**

1. Enforce the provisions of the Alquist-Priolo Earthquake Fault Zoning Act.  
**Responsible Departments: *Planning, Planning Commission, Board of Supervisors***
2. Development will not be permitted in floodways unless it meets the requirements of Chapter ~~16.40~~**16.50** of the County Code and is approved by the State Reclamation Board.  
**Responsible Departments: *Public Works, Planning, Planning Commission, Board of Supervisors***
3. Development proposals in an area identified as having unstable soils (bluff, landslide areas in the foothills, etc.) shall include measures for mitigating possible hazards.  
**Responsible Departments: *Public Works, Planning, Planning Commission, Board of Supervisors***
4. The County shall enforce the subdivision ordinance requirement for soils reports, which may be required to include a geologic report.  
**Responsible Departments: *Public Works, Planning Commission, Board of Supervisors***
5. The County shall utilize the California Environmental Quality Act (CEQA) process to ensure that development does not occur that would be subject to natural disasters.  
**Responsible Departments: *Planning, Planning Commission, Board of Supervisors***
- 6. Development proposals shall be reviewed for conformance with all applicable Hazard Mitigation Plans and consistency with policies of the Safety Element.  
Responsible Departments: *Planning, Planning Commission, Board of Supervisors***



## **POLICY SEVENTEEN**

Develop a plan to minimize the impacts of a disaster.

### **IMPLEMENTATION MEASURES**

1. The County Office of Emergency Services will continue to work with other jurisdictions to develop evacuation routes to be used in case of a disaster. Evacuation routes will serve all of the jurisdictions in the County. Plans for evacuation routes must be coordinated with the cities.  
**Responsible Department: *Office of Emergency Services***
2. In case of a disaster, the County will use the adopted emergency plan and the procedures established in that document (**Multi-Jurisdictional Hazard Mitigation Plan**).  
**Responsible Departments: *Office of Emergency Services, Sheriff, Fire Safety-Fire Warden's Office and the Local Fire Agency Having Jurisdiction, Board of Supervisors***
3. The County will provide information to anyone interested in forming a flood control district in Stanislaus County.  
**Responsible Department: *Public Works***

**GOAL SIX**

Improve air quality.

**POLICY EIGHTEEN**

The County will promote effective communication, cooperation and coordination among agencies involved in developing and operating local and regional air quality programs.

**IMPLEMENTATION MEASURES**

1. Refer discretionary projects under CEQA review to the San Joaquin Valley ~~Unified~~ Air Pollution Control District (SJV~~U~~APCD), neighboring jurisdictions and other affected agencies for review and comment.  
**Responsible Department: Planning**
2. Work with other agencies in the San Joaquin Valley to establish coordinated air quality programs and implementation measures.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**

**POLICY NINETEEN**

The County will strive to accurately determine and fairly mitigate the local and regional air quality impacts of proposed projects.

**IMPLEMENTATION MEASURES**

1. Require all development proposals, where appropriate, to include reasonable air quality mitigation measures.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
2. Minimize case-by-case analysis of air quality impacts through the use of standard criteria for determining significant environmental effects, a uniform method of calculating project emissions, and standard mitigation methods to reduce air quality impacts.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**

**POLICY TWENTY**

The County shall strive to reduce motor vehicle emissions by reducing vehicle trips and vehicle miles traveled and increasing average vehicle ridership.

## IMPLEMENTATION MEASURES

1. Through strategies identified in the Circulation Element, ensure that circulation systems are designed and maintained to minimize traffic congestion and vehicle emissions.  
**Responsible Departments: Public Works, Planning, Planning Commission, Board of Supervisors**
2. Support a broad range of transportation modes, including public transit, bicycling and pedestrian travel, through the strategies identified in the Circulation Element.  
**Responsible Departments: Public Works, Planning, Planning Commission, Board of Supervisors**
3. Help achieve a jobs/housing balance by working with appropriate organizations to attract employers to Stanislaus County.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**

## POLICY TWENTY-ONE

The County will support efforts to increase public awareness of air quality problems and solutions.

## IMPLEMENTATION MEASURES

1. Support and participate in the air quality education programs of the SJV~~U~~APCD to the greatest extent possible.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
2. Support education programs that increase public awareness of techniques to reduce ~~fine~~ particulate matter (~~PM-10~~) emissions.  
**Responsible Departments: Environmental Resources Public Health, U.C. Cooperative Extension, Agricultural Commissioner, Agricultural Advisory Board, Planning, Board of Supervisors**
3. Work with the local building industry, utilities, and the SJV~~U~~APCD to educate developers and builders on the benefits of energy-efficient designs and the use of low-emission equipment for new residential and commercial construction.  
**Responsible Departments: Planning**

## GOAL SEVEN

Support efforts to minimize the disposal of solid waste through source reduction, reuse, recycle, composting and transformation activities.

~~(Comment: As urbanization spreads and populations increase, more and more refuse is produced. Public Resources Code, Section 41780, requires Stanislaus County to reduce solid waste disposal 50% by the year 2000 through maximizing the use of all feasible source reduction, recycling and composting options. For wastes that cannot be feasibly reduced at their source, recycled, or composted, the practices of environmentally safe transformation or land disposal, or both, may be used. Barriers to siting such disposal facilities include environmental factors and costs.)~~

## POLICY TWENTY-TWO

The County will support the solid waste management hierarchy established by the California Public Resources Code, Section 40051, and actively promote the goals and objectives specified in the Countywide Integrated Waste Management Plan.

## IMPLEMENTATION MEASURES

1. Encourage and promote activities, projects, legislation, business and industries that cause solid waste to be reduced at the source, reused, recycled and/or composted.  
**Responsible Departments: Planning, Environmental Resources, Planning Commission, Board of Supervisors, ~~SCEDCO~~**
2. ~~Complete and adopt the state-mandated Countywide Integrated Waste Management Plan by January 31, 1996.~~ **Maintain an up to date Countywide Integrated Waste Management Plan.**  
**Responsible Departments: Environmental Resources, Board of Supervisors**
3. Encourage the use of transformation facilities (such as waste-to-energy plants) as a component of the County's integrated waste management system.  
**Responsible Departments: Environmental Resources, Planning, Planning Commission, Board of Supervisors**
4. Actively pursue the identification, siting, permitting and operation of additional landfill capacity to receive solid wastes that are not diverted from disposal and for the disposal of ash from transformation facilities.  
**Responsible Departments: Environmental Resources, Planning, Planning Commission, Board of Supervisors**

5. Encourage and promote activities, projects, legislation, businesses and industries that cause special wastes (e.g., food processing ~~residue~~ **by-products**, demolition/construction waste, inert wastes, **e-waste/universal waste**, tires, de-watered sludge, household hazardous waste, etc.) to be safely diverted from landfills or transformation facilities, including composting and co-composting operations.  
**Responsible Departments: Environmental Resources, Planning, Planning Commission, Board of Supervisors**
  
6. **Permitting and operation of recycling facilities that receive waste materials diverted from landfills or transformation facilities shall be evaluated for compatibility with surrounding land uses.**  
**Responsible Departments: Environmental Resources, Planning, Planning Commission, Board of Supervisors**

### **POLICY TWENTY-THREE**

The County will protect existing solid waste management facilities, including the waste-to-energy plant and the Fink Road landfill, against encroachment by land uses that would adversely affect their operation or their ability to expand.

### **IMPLEMENTATION MEASURES**

1. Do not approve any discretionary projects within 1,000 feet of existing solid waste management facilities, including the Fink Road landfill and the waste-to-energy plant, unless such projects will have no adverse impact on those facilities or vice versa.  
**Responsible Departments: Public Works, Environmental Resources, Planning, Planning Commission, Board of Supervisors**
  
2. Explore the possibility of establishing an appropriate mechanism to preclude issuance of any building permits within 1,000 feet of solid waste management facilities, including the Fink Road landfill and the waste-to-energy plant.  
**Responsible Departments: Public Works, County Counsel, Planning, Board of Supervisors**

## GOAL EIGHT

Preserve areas of national, state, regional and local historical importance.

### POLICY TWENTY-FOUR

The County will support the preservation of Stanislaus County's cultural legacy of **archeological**, historical, ~~and archeological and paleontological~~ resources for future generations.

(Comment: Landmarks of historical consequence not only include old schoolhouses, and covered bridges, but also such sites as Native American burial grounds, cemeteries, pottery, rock carvings, and rock paintings. Normally, "sensitive" areas are often located near natural watercourses, springs or ponds, or on elevated ground. However, due to the silt build-up in the valley and the meandering of rivers, archaeological and historical sites may be found in unsuspected areas.)

### IMPLEMENTATION MEASURES

1. The County shall continue to utilize the HS (Historical Site) zone in Knight's Ferry and La Grange to protect the historical character of the communities.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
2. The County shall seek input from the Knight's Ferry Municipal Advisory Council concerning any development proposals in the HS zone in Knight's Ferry.  
**Responsible Departments: Planning, Historical Sub-Committee of the Planning Commission, Planning Commission, Board of Supervisors**
3. The County shall work with the County Historical Society, and other organizations and interested individuals to study, identify and inventory archeological resources and historical sites, structures, buildings and objects.  
**Responsible Departments: Parks and Recreation, Planning**
4. The County will cooperate with the State Historical Preservation Officer to identify and nominate historical structures, objects, buildings and sites for inclusion under the Historical Preservation Act.  
**Responsible Departments: Parks and Recreation, Planning**
5. The County shall utilize the California Environmental Quality Act (CEQA) process to protect archaeological, ~~or~~ historic, ~~or~~ paleontological resources. Most discretionary projects require review for compliance with CEQA. As part of this review, potential impacts must be identified and mitigated.  
**Responsible Departments: Parks and Recreation, Planning, Planning Commission, Board of Supervisors**



6. The County shall make referrals to the Office of Historic Preservation and the Central California Information Center as required to meet CEQA requirements and require.  
***Responsible Department: Planning***
7. The County will work with all interested individuals and organizations to protect and preserve the mining heritage of Stanislaus County.  
***Responsible Department: Parks and Recreation***

#### **POLICY TWENTY-FIVE**

"Qualified Historical Buildings" as defined by the State Building Code shall be preserved.

#### **IMPLEMENTATION MEASURES**

1. Whenever possible, the County Building ~~Inspection~~**Permits** Division shall utilize the provisions of the State Building Code that allow historical buildings to be restored without damaging the historical character of the building.  
***Responsible Department: Planning***
2. The County shall continue to utilize the HS (Historical Site) zone in Knight's Ferry and La Grange to protect the historical character of the communities.  
***Responsible Departments: Planning, Planning Commission, Board of Supervisors***

**GOAL NINE**

Manage extractive mineral resources to endure an adequate supply without degradation of the environment.

**POLICY TWENTY-SIX**

Surface mining in areas classified by the State Division of Mines and Geology as having significant deposits of extractive mineral resources shall be encouraged.

**IMPLEMENTATION MEASURES**

1. The County shall encourage and support the State Division of Mines and Geology or other public or private organizations in designating the County's sand and gravel resources.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
  
2. The County shall utilize the California Environmental Quality Act (CEQA) process to protect mineral resources as well as the environment. Most discretionary projects require review for compliance with CEQA. As a part of this review, environmental impacts and alternatives, must be identified and the manner for such significant effects to be avoided or mitigated must be indicated. ~~The Legislature declares that in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects.~~  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
  
3. **Areas identified in Special Reports prepared by the California Geological Survey, shall be covered by the Mineral Resource land use designation of the Land Use Element.** ~~The County shall adopt the Mineral Resources land use designation for those areas designated by the state as significant deposits of mineral by the State Division of Mines and Geology resources at such time as the State Division of Mines and Geology completes the countywide mineral resources designation process under the Surface Mining and Reclamation Act (SMARA).~~  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
  
4. **As necessary, t**he County shall ~~consider adopting update and maintain the~~ Mineral Resources land use designation for those areas, **within Stanislaus County,** identified as significant deposits of mineral resources in ~~the 1993 (Special Report 173) Mineral Land Classification of Stanislaus County~~ **Special Reports** prepared by the ~~State Division of Mines and Geology~~ **California Department of Conservation, California Geological Survey.**  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**

## POLICY TWENTY-SEVEN

The County shall emphasize the conservation and development of lands having significant deposits of extractive mineral resources by not permitting uses that threaten the potential to extract the minerals.

### IMPLEMENTATION MEASURES

1. Requests for conversion of lands with significant deposits of extractive mineral resources (e.g., sand and gravel) to urban uses shall not be approved unless provisions are made for extraction prior to development.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
2. Any approval of potentially incompatible land uses in and surrounding areas containing significant deposits of extractive mineral resources shall include conditions mitigating the significant land use conflicts.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
3. ~~The classification maps and mineral information contained in the Mineral Land Classification of Stanislaus County, California (Special Report 173 and 199),~~ **Special Reports identifying mineral resources within Stanislaus County and prepared by the California Geological Survey (See Appendix III-A - Special Report 173, and III-B – Special Report 199), together with Public Resources Code Section 2710 et seq. (SMARA) and state policy,** are hereby incorporated in this General Plan by reference.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**

## POLICY TWENTY-EIGHT

Lands used for the extraction of mineral resources shall be reclaimed as required by the Surface Mining and Reclamation Act of 1975 (SMARA) to minimize undesirable impacts.

### IMPLEMENTATION MEASURES

1. Approval of any excavation permits shall include requirements for reclamation of the land consistent with the land use designation.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
2. Mineral excavation on productive agricultural land should have a reclamation plan that retains or restores a maximum amount of agricultural or open space land.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**

**GOAL TEN**

Protect fish and wildlife species of the County.

**POLICY TWENTY-NINE**

~~Adequate water flows should be maintained in the County's rivers to allow salmon migration.~~

**IMPLEMENTATION MEASURE**

- ~~1. The County should continue to lobby the federal government to provide adequate water flow in the County's rivers to allow salmon migration.  
*Responsible Department: Board of Supervisors*~~

**POLICY ~~THIRTY-TWENTY-NINE~~**

Habitats of rare and endangered fish and wildlife species, **including special status wildlife and plants**, shall be protected. ~~Information on rare and endangered species and habitats is constantly being updated in response to a 1982 state law by the California State Department of Fish and Game through various sources which include the Stanislaus Audubon Society, California Native Plant Society, and the Sierra Club.~~

**IMPLEMENTATION MEASURES**

- The County shall utilize the California Environmental Quality Act (CEQA) process to ensure that development does not occur that would be detrimental to fish, plant life, or wildlife species.  
*Responsible Departments: Planning, Planning Commission, Board of Supervisors*
- The County shall **utilize the California State Department of Fish and Wildlife's California Natural Diversity Data Base and the California's Native Plant Society plant lists as the primary sources of information on special status wildlife and plants.** ~~maintain information regarding fish and wildlife habitats and rare and endangered flora and fauna species.~~  
*Responsible Department: Planning*
- The County shall protect sensitive wildlife habitat and plant life through the strategies identified under Policy Three of this element.  
*Responsible Departments: Planning, Planning Commission, Board of Supervisors*

**GOAL ELEVEN**

Conserve resources through promotion of waste reduction, reuse, recycling, composting, ride-sharing programs and alternative energy sources such as mini-hydroelectric plants, gas and oil exploration, and transformation facilities such as waste-to-energy plants.

**POLICY THIRTY-~~ONE~~**

The County shall provide zoning mechanisms for locating material recovery facilities, recycling facilities, composting facilities, and new energy producers when the proposed location does not conflict with surrounding land uses.

**IMPLEMENTATION MEASURES**

1. The County shall include provisions in its zoning ordinance for siting material-recovery facilities, recycling facilities, composting facilities, mini-hydroelectric plants and **alternative energy sources.** ~~transformation facilities by June 30, 1997.~~  
**Responsible Departments: Environmental Resources, Planning, Planning Commission, Board of Supervisors**
2. The County shall actively pursue and implement projects, plans and programs that will effectively protect and conserve existing and future landfill capacity.  
**Responsible Departments: Environmental Resources, Board of Supervisors**

**POLICY THIRTY- ~~ONE-TWO~~**

New construction by the County shall meet or exceed code requirements for energy conservation.

**IMPLEMENTATION MEASURES**

1. New County facilities should be designed to maximize energy efficiency.  
**Responsible Departments: ~~Chiefo~~nty Executive Office, Planning**
2. Existing County facilities should be made to maximize energy efficiency where it is found to be economically reasonable.  
**Responsible Departments: ~~Chiefo~~nty Executive Office, Planning**

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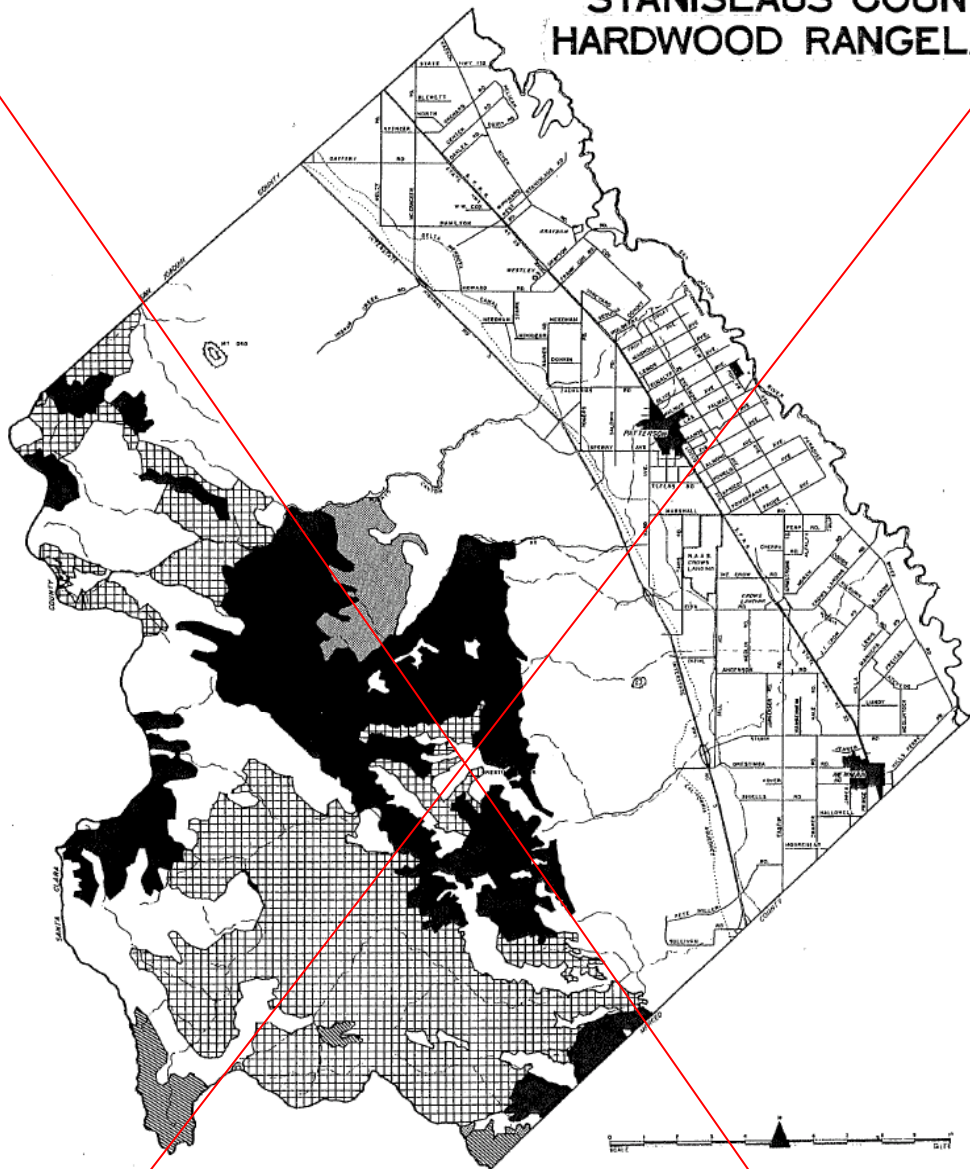
APPENDIX III-A

STANISLAUS COUNTY HARDWOOD RANGELANDS





~~Source: California Department of Forestry and Fire Protection (CDF) maps prepared by Pillsbury, N.H., et al. 1991. From 1981 1:24,000 CDF aerial photos. Hardwoods above 5,000 feet were not mapped.~~

~~Refer to Extent and Ownership of California's Hardwoods for additional information.~~

# STANISLAUS COUNTY HARDWOOD RANGELANDS

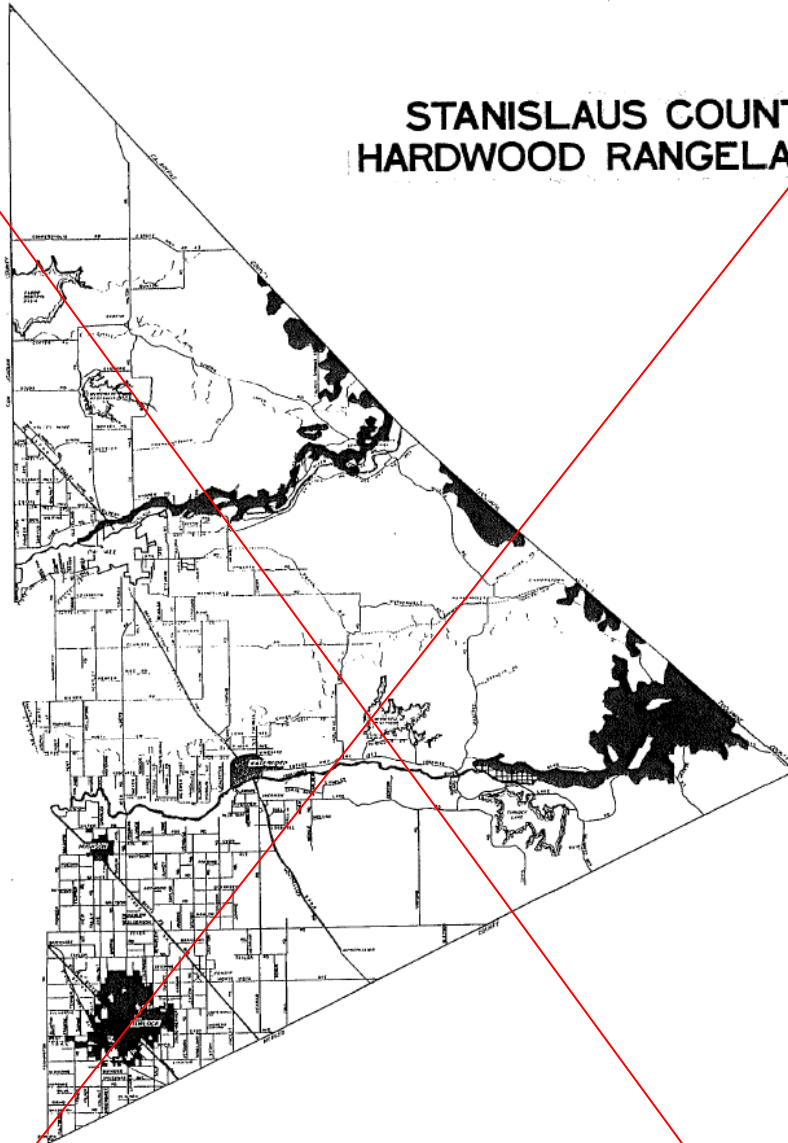


SPECIES GROUP





- |   |  |
|---|--|
|  BLUE OAK WOODLAND                 |  VALLEY OAK WOODLAND  |
|  BLUE OAK - FOOTHILL PINE WOODLAND |  COASTAL OAK WOODLAND |

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# STANISLAUS COUNTY HARDWOOD RANGELANDS



### SPECIES GROUP

- |   |   |
|---|---|
|  BLUE OAK WOODLAND                 |  VALLEY OAK WOODLAND  |
|  BLUE OAK - FOOTHILL PINE WOODLAND |  COASTAL OAK WOODLAND |

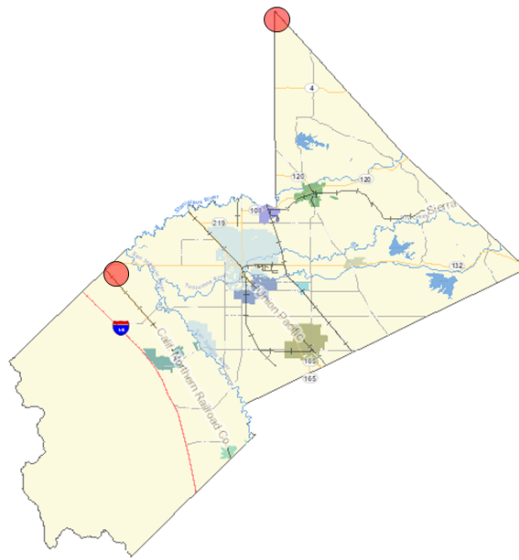
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APPENDIX III-B-A

AGGREGATE RESOURCE AREAS OF STANISLAUS COUNTY,  
CALIFORNIA

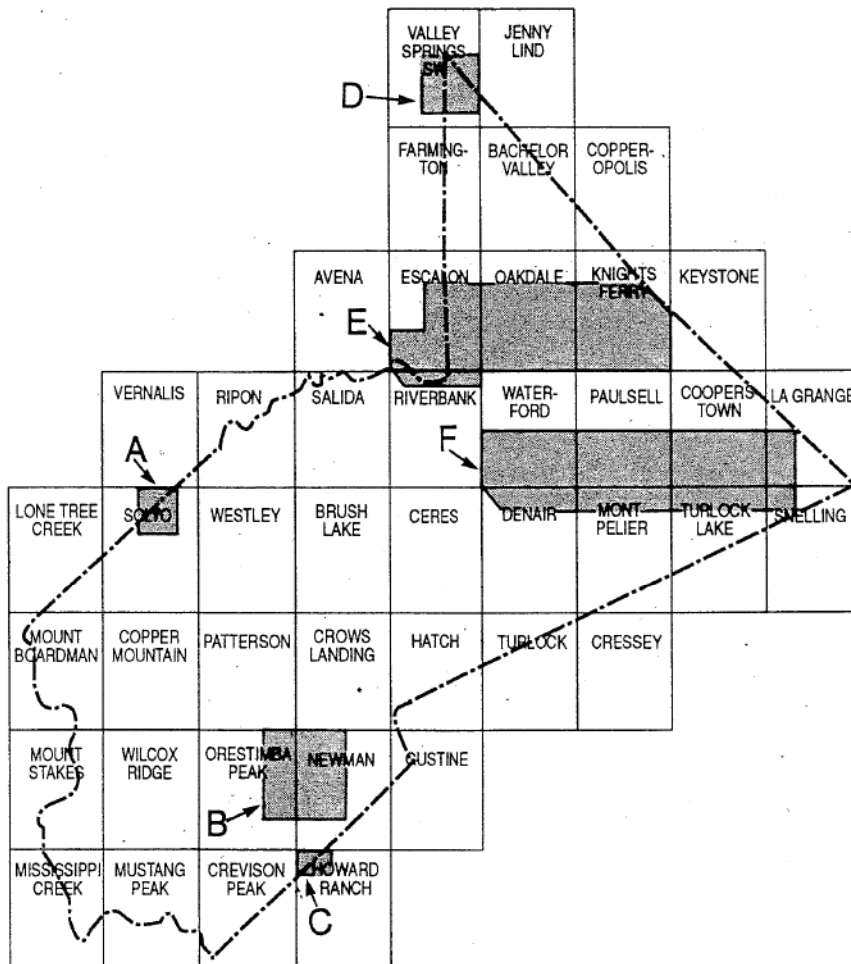
**Special Report No. 173 - Stanislaus County Aggregate Resources**

Special Report No. 91-03, 160, and 199 are incorporated by reference, and cover the areas in Stanislaus County highlighted in the red circles on the County map below. Maps and Special Reports are available through the California Department of Conservation, Division of Mines and Geology.





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Index map of U.S.G.S. 7.5-minute quadrangles used to compile bases.

Topographic base maps by U.S. Geological Survey.



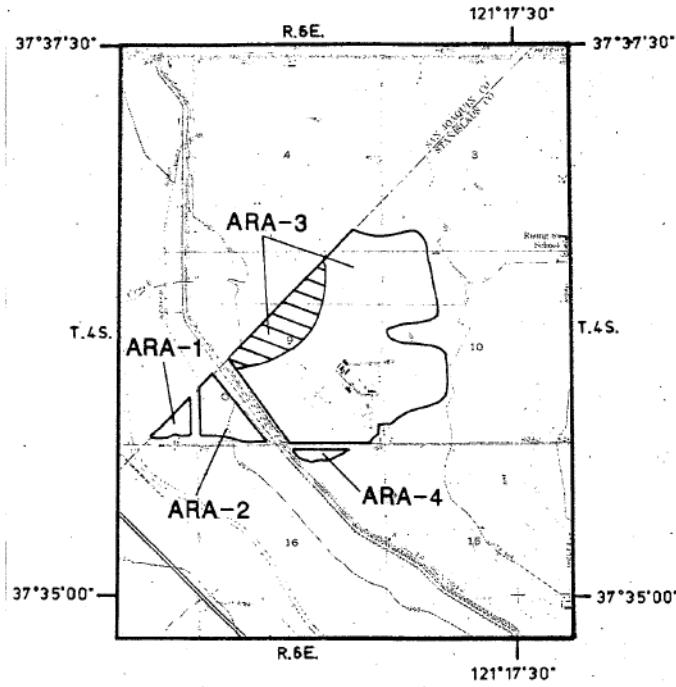
## AGGREGATE RESOURCE AREAS OF STANISLAUS COUNTY

State Division of Mines & Geology  
Special Report 173 (1993)

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### AGGREGATE RESOURCE AREAS OF STANISLAUS COUNTY

State Division of Mines & Geology  
Special Report 173 (1993)



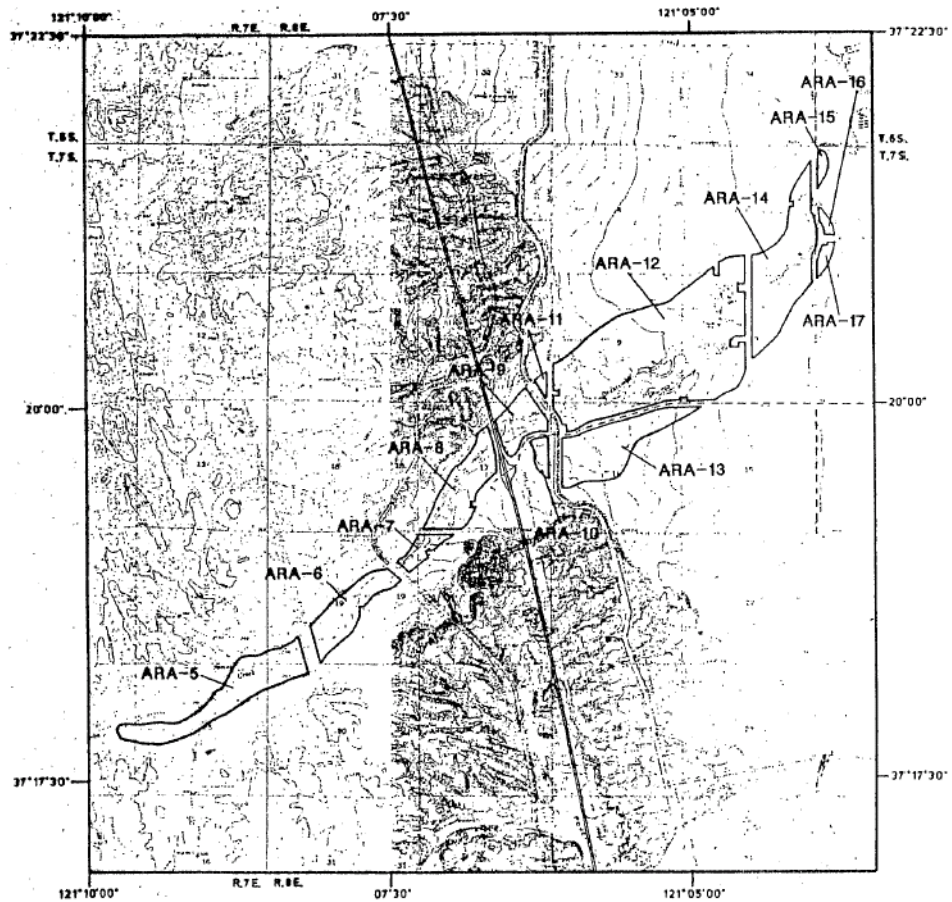
A-HOSPITAL CREEK FAN ARA's



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State Division of Mines & Geology  
Special Report 173 (1993)



B-ORESTIMBA CREEK FAN ARA'S

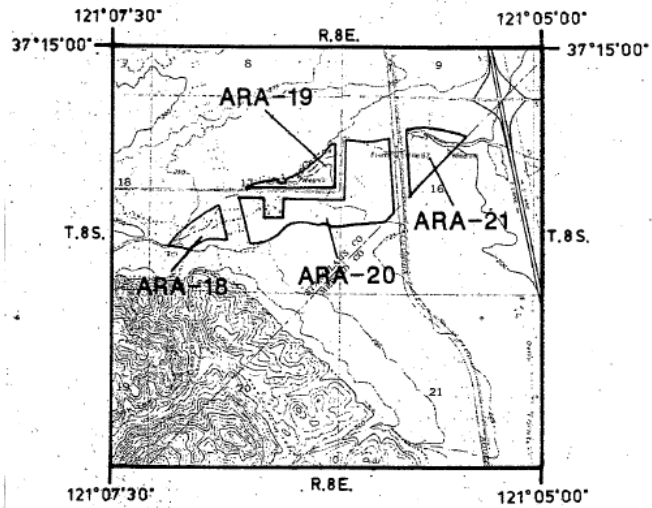




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# AGGREGATE RESOURCE AREAS OF STANISLAUS COUNTY

State Division of Mines & Geology  
Special Report 173 (1993)



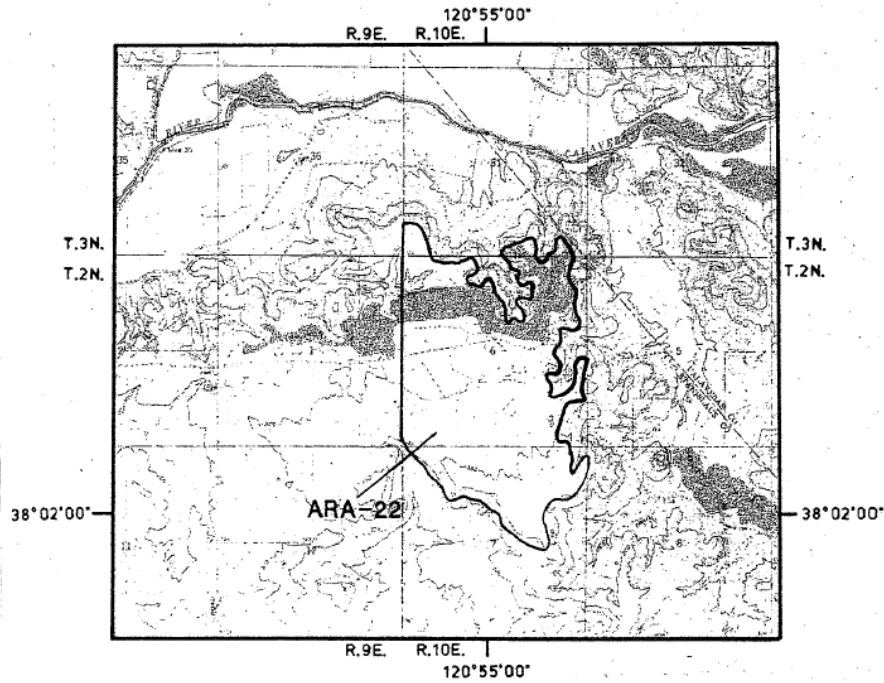
C-GARZAS CREEK FAN ARA'S



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# AGGREGATE RESOURCE AREAS OF STANISLAUS COUNTY

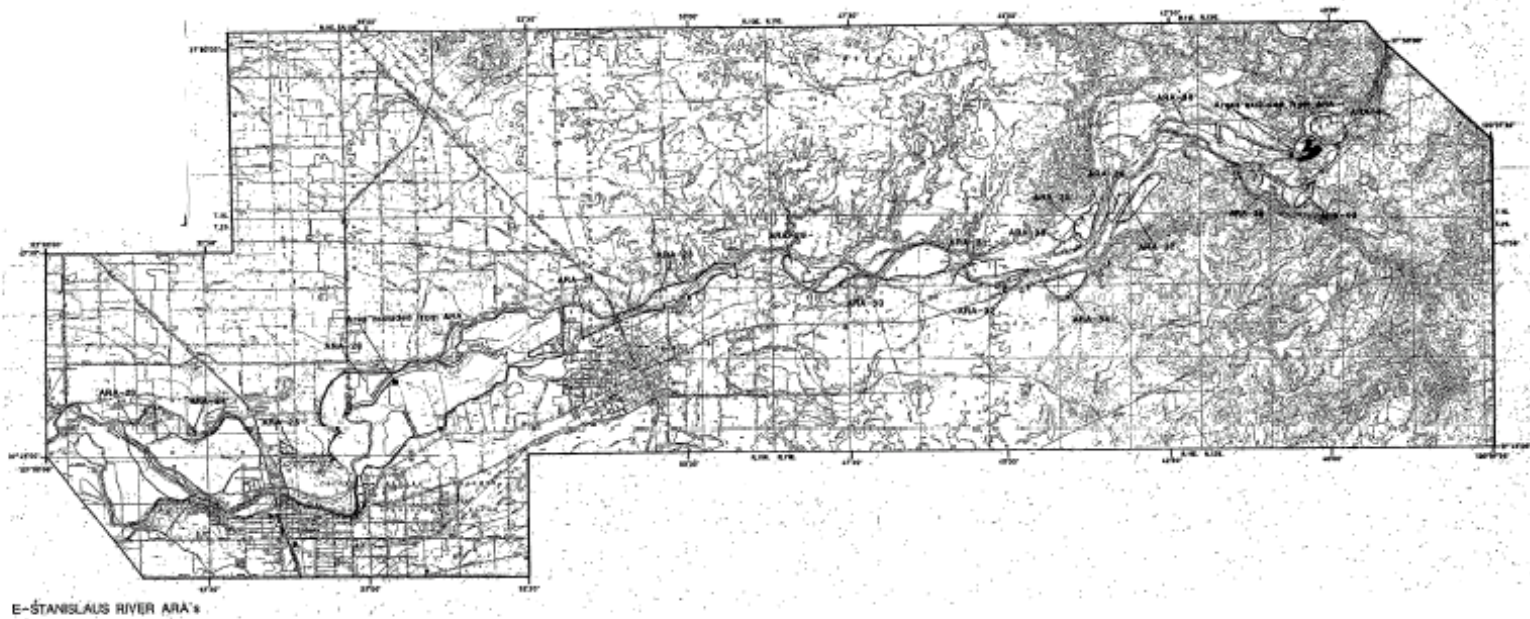
State Division of Mines & Geology  
Special Report 173 (1993)



D-CALAVERAS RIVER TERRACE ARA



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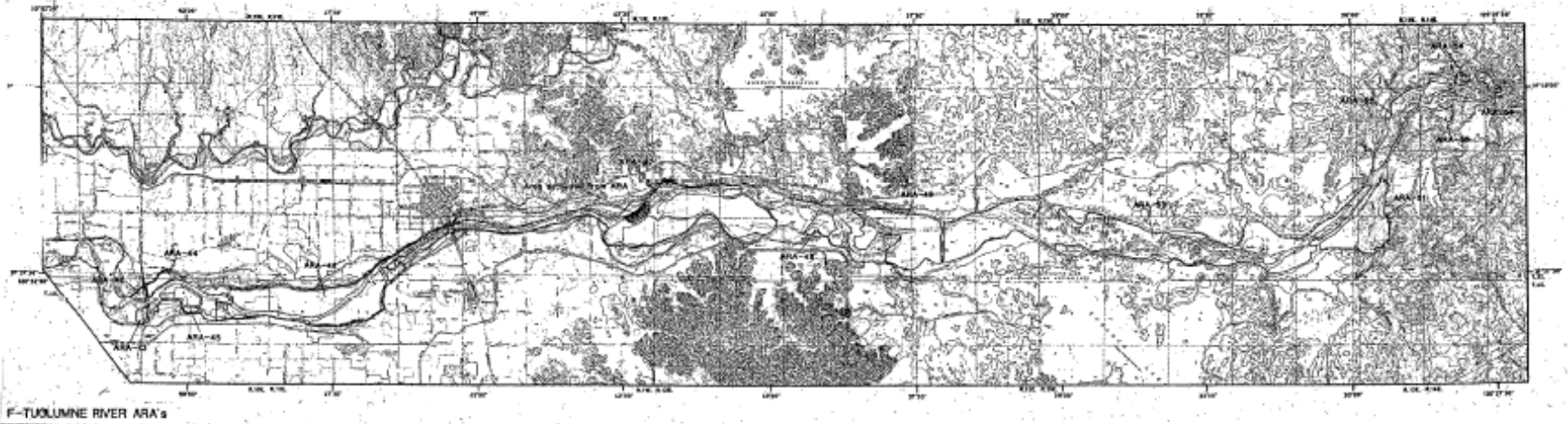
**AGGREGATE RESOURCE AREAS  
OF STANISLAUS COUNTY**  
State Division of Mines & Geology  
Special Report 173 (1993)

III-45

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**AGGREGATE RESOURCE AREAS  
OF STANISLAUS COUNTY**  
State Division of Mines & Geology  
Special Report 173 (1993)

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Chapter ~~Four~~ 4

**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>4</sup> ~~The 2003 Noise Element Guidelines requires local~~ **Local** governments **are required** 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 Governor’s Office of Planning & Research, General Plan Guidelines, 2003**). 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~~ **An** explanation of the acoustical terminology used in this document **is included below**.

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~~ **Principal Arterials, Minor Arterials, or Major Collectors**
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

---

<sup>4</sup> State of California General Plan Guidelines 2003, Governor’s Office of Planning and Research (OPR), State of California, October 2003, p. 87.

5. Sensitive wildlife habitat, including the habitat of rare, threatened, or endangered species
6. Other uses deemed noise sensitive by the local jurisdiction

### **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**

~~A The~~ Technical Reference Document, **prepared in 2005, included in the General Plan Support Document, is an update of a previous technical reference document and that** provides a discussion of the fundamentals of noise assessment, the effects of noise on people and criteria for acceptable noise exposure, **is provided in Appendix IV-A of this element.** 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" are** 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, **which have been identified and studied**. 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 **2005** Technical Reference Document, **provided in Appendix IV-A of this element**.

### **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  $L_{dn}$  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  $L_{dn}$  2030 noise contours of major roadway noise sources.~~ Noise exposure contours for major transportation sources of noise within the unincorporated areas of Stanislaus County **were are identified also contained** within Appendix IV-A (Existing Noise Sources) and B (Future Noise Sources) of the **2005** 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 **were are** generally based upon annual average conditions, and **were 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 **were have been** prepared to assist Stanislaus County with the implementation of the Noise Element through the project review and long range planning processes.

**This element, as updated in 2016, incorporates the 2005 Technical Reference Document as a source for existing noise measurements; including a summary of long-term and short-term measurements and noise contour distances for major railroad. As part of the 2016 update, Figure IV-1- Predicted Year 2035 traffic noise levels has been incorporated. Updated airport noise contours for the Modesto City/County and the Oakdale Municipal airports are available in the Airport Land Use Compatibility Plan adopted by the Stanislaus County Airport land Use Commission.**



### **3.0—COMMUNITY NOISE SURVEY**

**The 2005 Technical Reference Document (Appendix IV-A), incorporates the 2004 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.

**As part of the community noise survey, 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 Leq, 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 Leq, 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 2005 Technical Reference Document.**

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 IV-23 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 IV-1: NOISE CONTOUR DISTANCES FOR MAJOR RAILROAD LINES (2004)**

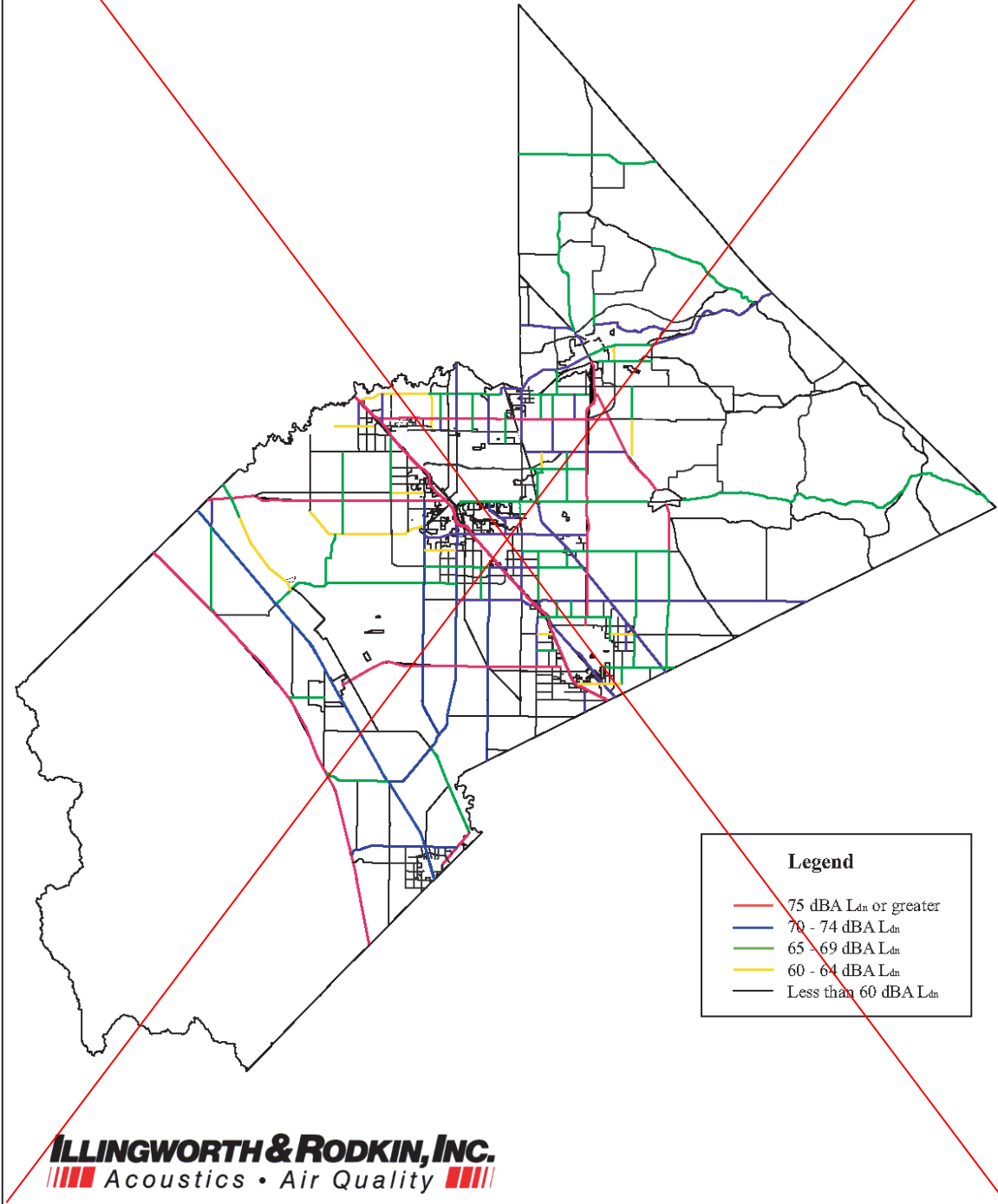
| Railroad Description*                              | Distance from Centerline from Roadway (in feet)<br>Based on Traffic Noise Modeling |        |        |        |
|--|--|--------|--------|--------|
|  | 75-Ldn   | 70-Ldn | 65-Ldn | 60-Ldn |
| Union Pacific Railroad (UPRR)                      | 70   | 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.*

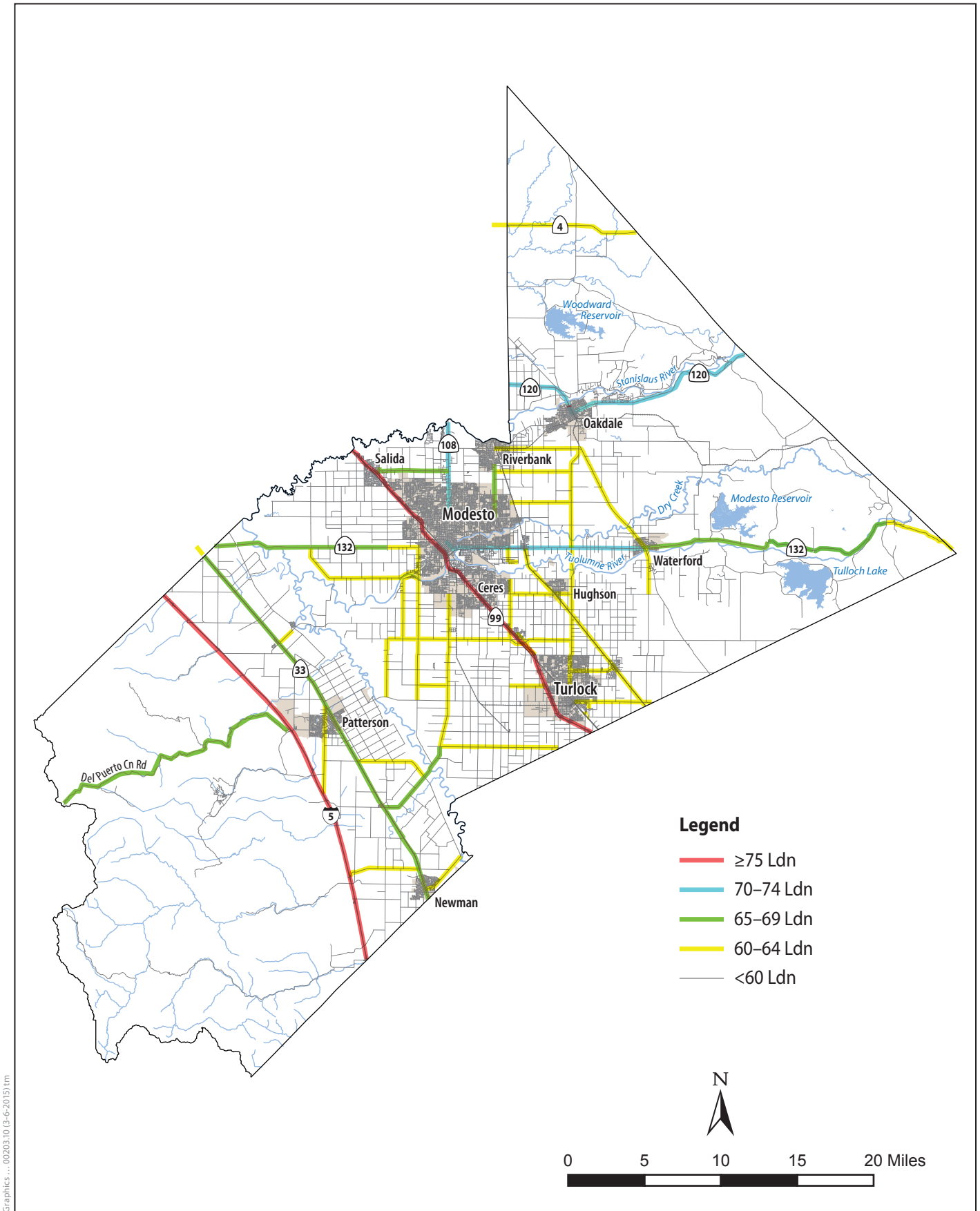
*\*\*Distances of less than 50 feet are not included in this table.*

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**Predicted Future (2030) Noise Levels for Major Roadways in Stanislaus County  
75 feet from the Centerline of the Roadway**



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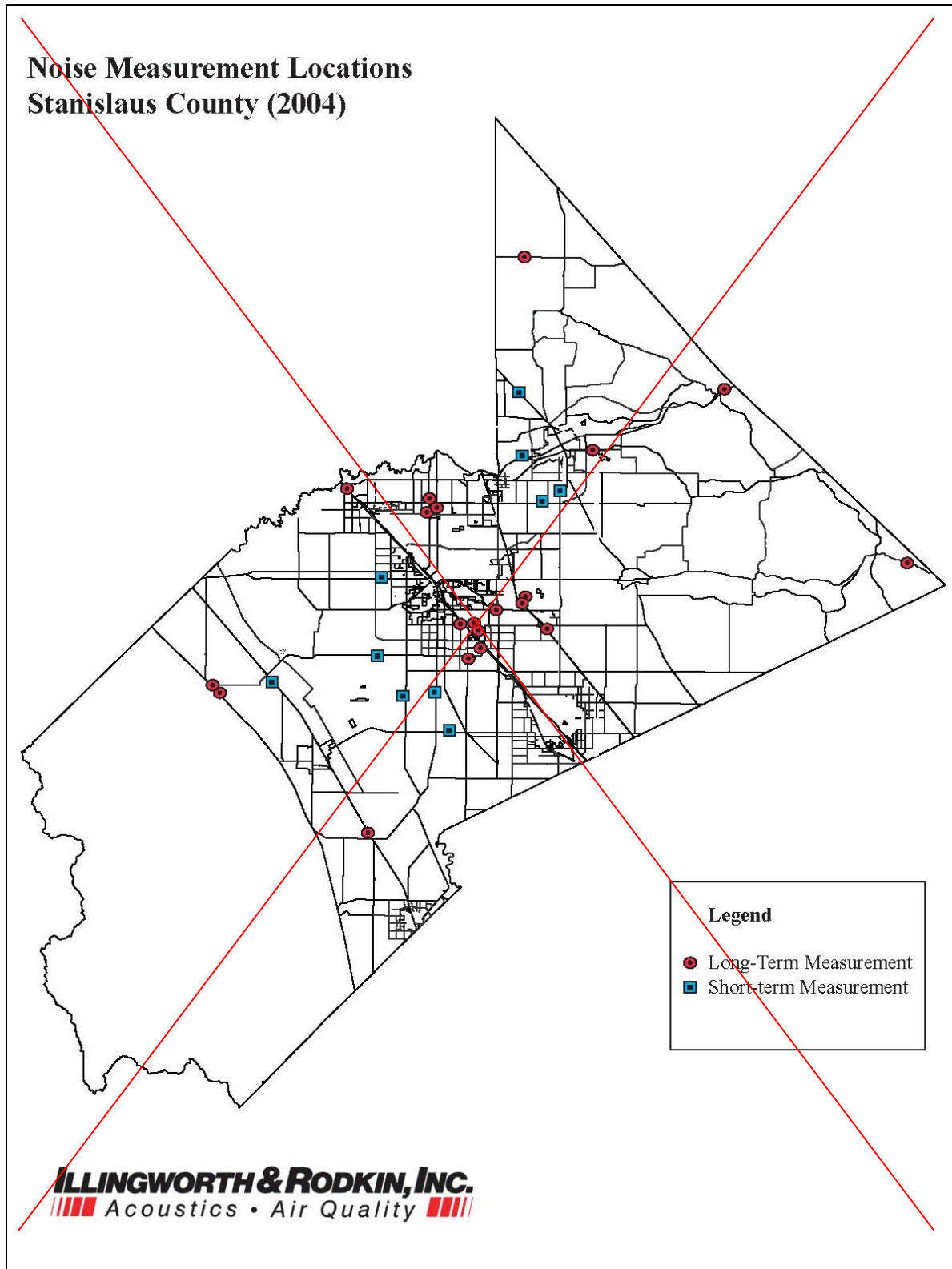


**FIGURE IV -1**  
**Predicted Year 2035 Traffic Noise Levels**  
**(Ldn, 75 feet from Roadway Centerline)**

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



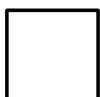
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**FIGURE IV-23: LAND-USE COMPATIBILITY FOR NORMALLY ACCEPTED COMMUNITY NOISE ENVIRONMENTS**

| Land Use Category  | Exterior Noise Exposure<br>Ldn 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                          |   |    |    |    |    |    |

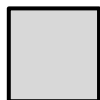
**\* Residential development sites exposed to noise levels exceeding 60 Ldn shall be analyzed following protocols in Appendix Chapter 12, Section 1208A, Sound Transmission Control, California Building Code.**

*\*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 1208A, 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 ~~IV-2-3~~ or the performance standards described by Table ~~IV-2-4~~. Maps showing existing and projected future noise exposures exceeding 60 Ldn or CNEL for the major noise sources are depicted in Figure ~~IV-1~~, **and** Table ~~IV-1~~, ~~and are included in Appendix A and B of the Technical Reference Document (2004).~~

**Responsible Departments: Environmental Resources, Planning, 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  $L_{dn}$  (or CNEL) or less in outdoor activity areas of single family residences, 65  $L_{dn}$  (or CNEL) or less in community outdoor space for multi-family residences, and 45  $L_{dn}$  (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  $L_{dn}$  (or CNEL) will be allowed. Under no circumstances will interior noise levels be allowed to exceed 45  $L_{dn}$  (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 **IV-24**.

***Responsible Departments: Environmental Resources, Planning, 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  $L_{dn}$  (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 **IV-24** in areas containing residential or other noise sensitive land uses.

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

**TABLE IV-24-**

**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 IV-24 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 IV-24 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:
  - 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<sub>dn</sub> (or CNEL) and the standards of Table IV-24 (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: Environmental Resources, Planning, Planning Commission, Board of Supervisors**

4. Projects which go 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: Environmental Resources, Planning, Planning Commission, Board of Supervisors**

<sup>2</sup>1 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.



5. Noise level criteria applied to land uses other than noise sensitive uses shall be consistent with the recommendations of Figure **IV-23: Land Use Compatibility for Normally Accepted Community Noise Environments**.  
**Responsible Departments: Environmental Resources, Planning, Planning Commission, Board of Supervisors**
6. Stanislaus County shall enforce Sound Transmission Control Standards in the **California Administrative Code, Title 25, Section 1092** ~~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<sub>dn</sub> or CNEL.  
**Responsible Department: Planning**
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: Environmental Resources, Planning**

### **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<sub>dn</sub> at noise-sensitive uses to increase by 3 dBA or more and exceed the normally acceptable" level, cause the L<sub>dn</sub> 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, Planning Commission, Board of Supervisors**
2. **Actively enforce the Stanislaus County Noise Control Ordinance to reduce the number of incidents of excessive noise.**  
**Responsible Departments: Sheriff, Environmental Resources, Planning, 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: Chief 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 **excessive vehicle noise**. ~~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 ~~or adopted Airport Land Use Compatibility Plan(s) (ALUCP).~~

## **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: Environmental Resources Planning, 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**

3. **The Noise Element and Land Use Elements of the General Plan shall be reviewed and amended as necessary to ensure consistency with the policies of the Airport Land Use Compatibility Plan(s) (ALUCP) as they relate to the prevention of future noise conflicts.**

**Responsible Departments: Planning, Planning Commission, Airport Land Use Commission, Board of Supervisors.**

4. **Update the Stanislaus County Noise Control Ordinance as necessary to be consistent with the General Plan and/or adopted Airport Land Use Compatibility Plan(s) (ALUCP).**

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

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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.

APPENDIX IV-A

Chapter IV

**NOISE  
SUPPORT  
DOCUMENTATION**

*Prepared by  
Illingworth & Rodkin, Inc.  
Acoustics – Air Quality*

***Stanislaus County General Plan Update  
Technical Reference Document for Noise Analysis***

**November 25, 2005**



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**Job No.: 04-081**

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## *A. Introduction*

This Technical Reference Document is a supplement to the Noise Element of the General Plan, which provides background information concerning the methods and data used in preparation of the Noise Element. It is intended that this document be used by Stanislaus County as a resource when evaluating noise related implications of specific development proposals or long-range planning efforts. A brief discussion of acoustical fundamentals is presented to assist the reader in understanding the subsequent discussion. The discussion of the existing noise environment is based upon the results of a noise monitoring survey conducted in July and August 2004 and supplemented by the noise study report prepared by Illingworth & Rodkin, Inc. for the Ceres Southern Gateway Study. This study focuses on transportation noise sources such as vehicular traffic, railroad noise, and aircraft activities. Major industrial facilities in the County are also discussed.

## *B. Fundamentals of Acoustics*

### **1. Measuring Noise**

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its pitch or its loudness. Pitch is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. Loudness is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. A decibel (dB) is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 1.

There are several methods of characterizing sound. The most common in California is the A-weighted sound level or dBA. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 2. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called Leq. The most common averaging period is hourly, but Leq can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

**TABLE 1: DEFINITIONS OF ACOUSTICAL TERMS**

| Term                                   | Definitions   |
|--|---|
| Decibel, dB                            | A unit 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).   |
| Frequency, Hz                          | The number of complete pressure fluctuations per second above and below atmospheric pressure.   |
| A-Weighted Sound Level, dBA            | The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted, unless reported otherwise. |
| L01, L10, L50, L90                     | The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.  |
| Equivalent Noise Level, Leq            | The average A-weighted noise level during the measurement period.   |
| Community Noise Equivalent Level, CNEL | The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 pm to 10:00 pm and after addition of 10 decibels to sound levels measured in the night between 10:00 pm and 7:00 am.  |
| Day/Night Noise Level, Ldn             | The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.   |
| Lmax, Lmin                             | The maximum and minimum A-weighted noise level during the measurement period.   |
| Ambient Noise Level                    | The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.  |
| Intrusive                              | That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.  |



TABLE 2 TYPICAL SOUND LEVELS

| Noise Generators<br>(At a Given Distance from Noise<br>Source)              | A-Weighted<br>Sound Level<br>in Decibel | Noise<br>Environments                          | Subjective<br>Impression |
|---|---|--|--------------------------|
|   | 140                                     |  |                          |
| Civil defense siren<br>(100 feet)   | 130                                     |  |                          |
| Jet take-off (200 feet)   | 120                                     |  | Pain threshold           |
|   | 110                                     | Rock music<br>concert                          |                          |
| Diesel pile drive<br>(100 feet)   | 100                                     |  | Very loud                |
| Freight cars (50 feet)  | 90                                      | Boiler room<br>Printing press<br>plant         |                          |
| Pneumatic drill (50 feet)<br>Freeway (100 feet)<br>Vacuum cleaner (10 feet) | 80<br>70                                | In kitchen with<br>garbage disposal<br>running | Moderately loud          |
|   | 60                                      | Data processing<br>center                      |                          |
| Light traffic (100 feet)<br>Large transformer<br>(200 feet)                 | 50                                      | Department<br>store                            |                          |
|   | 40                                      | Private business<br>office                     | Quiet                    |
| Soft whisper (5 feet)   | 30                                      | Quiet bedroom                                  |                          |
|   | 20                                      | Recording<br>studio                            |                          |
|   | 10                                      |  | Threshold of hearing     |
|   | 0                                       |  |                          |

Since the sensitivity to noise increases during the evening and at night -- because excessive noise interferes with the ability to sleep -- 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The Community Noise Equivalent Level, CNEL, is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 p.m. - 10:00 p.m.) and a 10 dB addition to nocturnal (10:00 p.m. - 7:00 a.m.) noise levels. The Day/Night Average Sound Level, Ldn, is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

## 2. Effects of Noise

This section discusses several effects of noise including hearing loss, sleep and speech interference and annoyance.

### a. Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise, but may be due to a single event such as an explosion.

Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard, which is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

### b. Sleep and Speech Interference

The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55 dBA if the noise is fluctuating. Outdoors the thresholds are about 15 dBA higher. Steady noise of sufficient intensity (above 35 dBA) and fluctuating noise levels above about 45 dBA have been shown to affect sleep. Interior residential standards for multi-family dwellings are set by the State of California at 45 dBA  $L_{dn}$ .

The standard is designed for sleep and speech protection and most jurisdictions apply the same criterion for all residential uses. Typical structural attenuation is 12 to 17 dBA with open windows. With closed windows in good condition, the noise attenuation factor is around 20 dBA for an older structure and 25 dBA for a newer dwelling. Sleep and speech interference are therefore possible when exterior noise levels are about 57 to 62 dBA  $L_{dn}$  with open windows and 65 to 70 dBA  $L_{dn}$  if the windows are closed. Levels of 55 to 60 dBA are common along collector streets and secondary arterials, while 65 to 70 dBA is a typical value for a primary/major arterial. Levels of 75 to 80 dBA are normal noise levels at the first row of development outside a freeway right-of-way. In order to achieve an acceptable interior noise environment, bedrooms facing secondary roadways need to be able to have their windows closed; those facing major roadways and freeways typically need special glass windows.

### c. Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that the causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The  $L_{dn}$  as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed.

There continues to be disagreement about the relative annoyance of noise from aircraft and roadways. When measuring the percentage of the population highly annoyed, the threshold for ground vehicle noise is about 55 dBA  $L_{dn}$ . At an  $L_{dn}$  of about 60 dBA, approximately two percent

of the population is highly annoyed. When the  $L_{dn}$  increases to 70 dBA, the percentage of the population highly annoyed increases to about 12 percent of the population. There is, therefore, an increase of about one percent per dBA between an  $L_{dn}$  of 60 to 70 dBA. Between an  $L_{dn}$  of 70 to 80 dBA, each decibel increase results in about a two percent increase in population that is highly annoyed. People appear to respond more adversely to aircraft noise. When the  $L_{dn}$  is 60 dBA, approximately ten percent of the population is believed to be highly annoyed. Each decibel increase to 70 dBA adds about two percentage points to the number of people highly annoyed. Above 70 dBA, each decibel increase results in about a three percent increase in the percentage of the population highly annoyed.

### *C. Existing Noise Environment*

#### **1. Existing Noise Sources in Stanislaus County**

The major noise sources in Stanislaus County are vehicular traffic on state highways and major county roadways, railroad operations, airport operations, and industrial activities. This document focuses on transportation noise sources. Roadway traffic generates noise throughout the county. Railroad trains intermittently generate noise levels that are significant along the railroad tracks. General aviation aircraft contribute to intermittent noise levels in the county. Noise is also generated on individual parcels whether industrial, commercial or residential. These noise sources do not affect the overall noise environment throughout the community. CNEL contours for operations at the Oakdale Municipal Airport, Patterson Airport, Turlock Airport, Modesto City / County Airport, and the Crows Landing Naval Auxiliary Landing Field were derived from the existing Airport Master Plan reports as available and are shown in Appendix A. Figure A-1 in Appendix A shows the generalized locations of long and short-term noise measurement sites for major ground transportation noise sources throughout Stanislaus County.

#### **2. Long-term Noise Measurements**

Daily noise levels were monitored at 11 locations in unincorporated Stanislaus County from July 20<sup>th</sup> to 22<sup>nd</sup>, 2004, at 4 locations in Ceres from May 18<sup>th</sup> to 21<sup>st</sup>, 2004, and at 4 additional locations in unincorporated areas and within the city of Hughson on August 31<sup>st</sup>-September 2<sup>nd</sup>, 2004. The noise measurement locations are shown on Figure A-1. The measured data are summarized in Table A-1 in Appendix A. The daily trends in noise levels measured at the 19 long-term sites are summarized in Figures A-2 through A-21 of Appendix A. The following discussion summarizes the long-term noise measurements.

##### **a. Location LT-1 – Highway 219**

Location LT-1 was selected to represent the noise exposure along Hwy 219. The measurement location was about 60 feet from the centerline of the roadway at the setback of the residence at 907 Kiernan Road, west of Highway 108. The data, shown in Figure A-2 of Appendix A, shows that the hourly daytime noise levels ranged from 66 to 68 dBA Leq and the hourly nighttime noise levels ranged from 56 to 66 dBA. The measured overall day/night noise level was 68 dBA  $L_{dn}$ .

b. Location LT-2 – Highway 108

This location was selected to measure the noise level along Highway 108, just north of Highway 219. The noise level approximately 50 feet from the centerline of Highway 108 was 76 dBA  $L_{dn}$ . Hourly daytime noise levels ranged from 71 to 74 dBA  $L_{eq}$  and the hourly nighttime noise levels ranged from 64 to 71 dBA  $L_{eq}$ . The data are shown in Figure A-3 of Appendix A.

c. Location LT-3 – SR 99, Northern Stanislaus County

This noise measurement location was approximately 200 feet from the centerline of SR 99 near the northern county line and was selected to measure vehicular traffic noise along SR 99 in the northern portion of the county. The measured noise level was 78 dBA  $L_{dn}$  and also included some railroad noise from the Union Pacific Railroad. The hourly average noise levels typically ranged from 69 dBA during the nighttime with no train movements to 75 dBA during the peak hour. Maximum noise levels generated by train movements were typically 81 to 82 dBA. The data are shown in Figure A-4 of Appendix A.

d. Location LT-4 – Highway 132

Noise levels were measured approximately 30 feet from the centerline of Highway 132, near the eastern county line. The measured day/night noise level was 68 dBA  $L_{dn}$ . Hourly average noise levels typically range from 63 to 67 dBA during daytime hours and drop to 51 dBA during nighttime hours. One loud event took place between 2:00 and 3:00 am, raising the  $L_{eq(hr)}$  by 6-9 dB above typical nighttime levels. This loud event is likely to have been a siren or loud vehicle along Highway 132. The measured data are shown on Figure A-5 of Appendix A.

e. Location LT-5 – Highway 120, Eastern Stanislaus County

Location LT-5 was selected to measure noise exposure along Highway 120 and was located approximately 50 feet from the centerline of the roadway near the eastern county line. The measured noise level was 75 dBA  $L_{dn}$ . The noise measurement data are shown in Figure A-6 of Appendix A. Hourly average noise levels typically ranged from 70 to 74 dBA during daytime hours and 62 to 72 dBA during nighttime hours.

f. Location LT-6 – Highway 4

Measurement Location LT-6 was located along Highway 4, east of Farmington. The noise environment at Location LT-6 was dominated by vehicular traffic along Highway 4. The measured noise level was 69 dBA  $L_{dn}$ . The noise measurement data are shown in Figure A-7 of Appendix A. Hourly average noise levels typically ranged from 63 to 67 dBA during daytime hours and dropped to 55 dBA during nighttime hours.

g. Location LT-7 – Central Avenue near Grayson Road

Location LT-7 was approximately 30 feet from the centerline of Central Avenue, south of Grayson Road. The measured noise level was 72 dBA  $L_{dn}$ . The noise measurement data are shown in Figure A-8 of Appendix A. Hourly average noise levels typically ranged from 65 to 70 dBA during daytime hours and dropped to 59 dBA during nighttime hours.

h. Location LT-8 – Interstate 5

Measurement Location LT-8 was approximately 65 feet from the near lane of Interstate 5 and was selected to characterize noise levels along Interstate 5. The measured noise level was 80 dBA Ldn. The data show a tight range of noise levels from the minimum sound level to the maximum sound level, which is typical of freeway traffic noise. To ensure the noise exposure in this location was dominated by Interstate 5 traffic noise, an additional measurement was made nearby (LT-16) in August/September 2004 and compared to the results of this measurement. Hourly average noise levels do not vary much day or night due to heavy truck traffic at night and heavy total traffic during the daytime. Hourly average noise levels typically ranged from about 73 to 75 dBA Leq. The day/night noise level at this location was 80 dBA Ldn. The noise measurement data are shown in Figure A-9 of Appendix A.

i. Location LT-9 – Highway 33

The measurement at Location LT-9 was approximately 50 feet from the centerline of Highway 33, just north of Crows Landing, and was selected to characterize the noise exposure along Highway 33. The measured noise level was 72 dBA Ldn. Hourly average noise levels ranged from about 65 to 70 dBA Leq during the daytime and drop to about 57 dBA Leq at night. The noise measurement data are shown in Figure A-10 of Appendix A.

j. Location LT-10 –BNSF Railroad, Santa Fe Avenue, North of Hughson

Two noise measurements were made at location LT-10, just north of Hughson at the intersection of Leedom Road and Santa Fe Avenue. The measurement location was used to characterize the noise environment along Santa Fe Avenue and the BNSF Railroad without interference from outside noise sources. The measurement location was about 150 feet east of the railroad tracks and about 50 feet east of the near lane of Santa Fe Avenue. Vehicular traffic along Santa Fe Avenue is a major contributing noise source at this location, with intermittent very loud noise events produced by train passbys. The measured day-night average noise level during the first measurement period, on July 21-22, 2004, was 78 dBA Ldn. Hourly average noise levels ranged from about 70 to 74 dBA Leq during the daytime and drop to about 62 dBA Leq at night.

The second measurement period took place on August 31 to September 2, 2004 and included exceedence data, which was correlated with exceedence data from LT-17 to estimate the number of train movements that took place during the measurement period. Review of exceedence data shows that 65 train movements took place during the two-day period with approximately 54% daytime operations (7:00 am to 7:00 pm), 11% evening operations (7:00 pm to 10:00 pm), and 35% nighttime operations (10:00 pm to 7:00 am). Train movements ranged from a few seconds up to more than two minutes in duration. The  $L_{dn}$  at this location was measured to be approximately 76 dBA, which includes both Railroad and Santa Fe Avenue traffic noise. Typical hourly average noise levels during the daytime ranged from 60 to 73 dBA Leq and with noise levels ranging from about 68 to 75 dBA Leq in the nighttime. The noise measurement data are shown in Figures A-11 and A-12 of Appendix A.

k. Location LT-11 –Hatch Road

Location LT-11 was 65 feet from the centerline of Hatch Road, north of Faith Home Road, and was selected to characterize existing noise levels along Hatch Road. The measured noise level was

74 dBA Ldn. The noise measurement data are shown in Figure A-13 of Appendix A. Hourly average noise levels ranged from about 66 to 71 dBA Leq during the daytime and drop to about 62 dBA Leq at night.

l. Location LT-12 – UPRR Railroad, State Route 99

Noise levels were monitored at this location to determine the noise levels and train frequency for the Union Pacific Railroad line. The measurement location was about 20 feet west of the railroad tracks in Ceres and about 105 feet east of the near lane of State Route 99. Vehicular traffic along SR 99 is a major contributing noise sources at this location, with intermittent very loud noise events produced by train passbys. The measured noise level over a three day measurement period ranged from 83 to 85 dBA Ldn. The range of noise levels was again narrow with typical hourly average noise levels during the daytime in the range of 76 to 80 dBA Leq and with noise levels dropping to about 71 dBA Leq in the middle of the night with no train passbys. Review of exceedence data shows that 48 train movements took place during the three-day period, with an average of about 16 trains per day with approximately 54% daytime operations (7:00 am to 7:00 pm), 13% evening operations (7:00 pm to 10:00 pm), and 33% nighttime operations (10:00 pm to 7:00 am). The  $L_{dn}$  at this location was measured to be approximately 83 to 85 dBA, which includes both Railroad and Highway noise. Based on additional measurements, it is estimated that SR 99 traffic noise generates an  $L_{dn}$  of approximately 82 dBA at this location and the rail operations generate an  $L_{dn}$  of approximately 80 to 83 dBA. The noise measurement data are shown in Figure A-14 of Appendix A.

m. Location LT-13 – Service Road, Ceres

Measurement location LT-13 was approximately 40 feet from the centerline of Service Road at the intersection of Service Road and Moffet Road in Ceres. This measurement location was selected to characterize the noise environment along Service Road and vehicular traffic along Service Road is the major contributing noise source at this location, with some local traffic noise generated along Moffet Road. The measured noise level was about 72 dBA Ldn. Train passbys along the western side of SR 99 were audible at times during passbys, but did not substantially contribute to the overall noise levels. Hourly average noise levels ranged from about 68 to 73 dBA Leq during the daytime and drop to about 61 dBA Leq at night. The noise measurement data are shown in Figure A-15 of Appendix A.

n. Location LT-14 – State Route 99

Noise levels were monitored at this location to determine the noise levels at residential areas along SR 99. The measurement location was about 270 feet east of the near lane of State Route 99 in Ceres, in the backyard of 2805 Evalee Lane. Vehicular traffic along SR 99 is a major contributing noise source at this location, with occasional local traffic noise produced along El Camino Avenue. The measurement was located behind a six-foot fence. The measured noise level was about 72 dBA Ldn. Train passbys along the western side of SR 99 were audible at times during passbys, but did not substantially contribute to the overall noise levels. Hourly average noise levels ranged from about 65 to 68 dBA Leq during the daytime and drop to about 60 dBA Leq at night. The noise measurement data are shown in Figure A-16 of Appendix A.

o. Location LT-15 – State Route 99

The noise environment at Location LT-15, located approximately 130 feet east of the near lane of State Route 99, was dominated by noise generated by State Route 99 traffic. Occasional local traffic noise produced along El Camino Avenue and local residential noise also contributed to the noise environment. The measured noise level was about 78 dBA Ldn. Train passbys along the western side of SR 99 were audible at times during passbys, but did not substantially contribute to the overall noise levels. Hourly average noise levels ranged from about 70 to 74 dBA Leq during the daytime and drop to about 64 dBA Leq at night. The noise measurement data are shown in Figure A-17 of Appendix A.

p. Location LT-16 – Interstate 5

Measurement Location LT-16 was approximately 60 feet east of the near lane of Interstate 5 (Northbound) in Westley and was selected to characterize noise levels along Interstate 5. The measured noise level was 80 dBA Ldn. The data show a tight range of noise levels from the minimum sound level to the maximum sound level, which is typical of freeway traffic noise and consistent with measurement LT-8. Hourly average noise levels do not vary much day or night due to heavy truck traffic at night and heavy total traffic during the daytime. Hourly average noise levels typically ranged from about 73 to 75 dBA Leq. The noise measurement data are shown in Figure A-18 of Appendix A.

q. Location LT-17 – BNSF Railroad, Santa Fe Avenue

Noise levels were monitored at this location to determine the noise levels and train frequency for the Burlington Northern and Santa Fe (BNSF) Railroad line. The measurement location was about 150 feet east of the railroad tracks in Hughson and about 25 feet east of the near lane of Santa Fe Avenue. Vehicular traffic along Santa Fe Avenue is a major contributing noise source at this location, with intermittent very loud noise events produced by train passbys. The Builders Choice Truss Company in Hughson is located near this location and industrial noise is audible when traffic along Santa Fe Avenue is light and there are no train movements. Typical hourly average noise levels during the daytime ranged from 68 to 78 dBA Leq and with noise levels ranging from about 59 to 80 dBA Leq in the nighttime. Review of exceedence data shows that 65 train movements took place during the two-day period with approximately 54% daytime operations (7:00 am to 7:00 pm), 11% evening operations (7:00 pm to 10:00 pm), and 35% nighttime operations (10:00 pm to 7:00 am). Train movements ranged from a few seconds up to more than two minutes in duration. The  $L_{dn}$  at this location was measured to be approximately 80 to 82 dBA, which includes both Railroad and Santa Fe Avenue traffic noise. The noise measurement data are shown in Figure A-19 of Appendix A.

r. Location LT-18 – Sierra Railroad

Noise levels were monitored at this location to determine the noise levels and train frequency for the Sierra Railroad line just east of Oakdale. The measurement location was about 50 feet north of the railroad tracks and about 25 feet north of the centerline of Sierra Road. Vehicular traffic along Sierra Road is light, but includes a high percentage of trucks. The measured noise level over a two-day measurement period was 72 dBA Ldn. Typical hourly average noise levels during the peak daytime hours ranged from 70 to 72 dBA Leq and with noise levels dropping to about 58 dBA Leq in the middle of the night with no train passbys. Review of exceedence data shows that 4



train movements took place during the two-day period, with 75% daytime operations (7:00 am to 7:00 pm) and 25% nighttime operations (10:00 pm to 7:00 am). The  $L_{dn}$  at this location was measured to be approximately 72 dBA, which includes both Railroad and Sierra Road traffic noise. The noise measurement data are shown in Figure A-20 of Appendix A.

s. Location LT-19 – Tidewater Railroad

Noise levels were monitored at this location to determine the noise levels and train frequency for the Tidewater Southern branch line of the Union Pacific Railroad line. Noise levels were measured along Saint John's Road, just south of Del Rio. The measurement location was about 35 feet from the railroad tracks and about 25 feet from the centerline of St. John's Road. Vehicular traffic along St. John's Road is the major contributing noise source at this location, with intermittent very loud noise events produced by train passbys. The measured noise level over the measurement period ranged from was 69 to 70 dBA Ldn. Typical hourly average noise levels during the peak daytime hours ranged from 64 to 70 dBA Leq and with noise levels dropping to about 43 dBA Leq in the middle of the night with no train passbys. Review of exceedence data shows that 1 train movement took place during the two-day period, during daytime hours. The  $L_{dn}$  at this location was measured to be approximately 69 to 70 dBA, which includes both Railroad and traffic noise. The noise measurement data are shown in Figure A-21 of Appendix A.

### 3. Short-Term Spot Measurements

Short-term spot measurements were made at ten locations throughout Stanislaus County in July of 2004 to characterize typical daytime noise levels and to collect traffic and noise data to be used subsequently in the computation of traffic noise contours for the General Plan. The noise measurement locations are shown in Figure A-1 in Appendix A. The measured data is summarized in Table A-2 in Appendix A. Vehicular traffic on the street network was the dominant noise source during measurements. There were small contributions from intermittent local noise such as distant dog barking or residential noise at a few of the locations. General aviation aircraft at Location ST-5 generated a maximum level of 54 dBA but automobiles and motorcycles were typically 10 to 20 dBA louder.

### 4. Roadways

The California Department of Transportation (Caltrans) Noise Prediction Model LeqV2 was used to develop  $L_{dn}$  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) conditions were obtained from Caltrans and the Stanislaus County Department of Public Works. These data were input into the traffic noise model for calibration with noise measurements conducted during the noise monitoring survey. Existing noise levels along county streets and highways were then calculated with the calibrated traffic noise model. Noise levels were estimated at 75 feet from the centerline of major roadways throughout the county and 150 feet from the center of highways. A summary of calculated distances to  $L_{dn}$  contours for existing and future conditions along major community roadways are shown in Table B-1 in Appendix B. The distances reported in Table B-1 can be considered to be worst-case estimates of noise exposure throughout the county because calculations do not take acoustical shielding from buildings or topography into account. Existing roadway noise contours were not mapped because small changes in noise levels over time would not be distinguishable on a map of

the scale represented in this document. For planning purposes, noise contour maps of the future noise levels can be found in Appendix B.

**5. Railroads**

Railroad operations in Stanislaus County include high speed mainline operations on the Burlington Northern and Santa Fe (BNSF) Railway and Union Pacific Railroad and low speed mainline and switching operations on the AT&SF Railway, UPRR, Sierra Railroad, Modesto and Empire Traction Company Railroad, and Tidewater Southern Railroad. Existing noise contours for these rail lines can be found in Table A-3 of Appendix A.

a. Union Pacific Railroad (UPRR)

The UPRR in Stanislaus County includes operations on the main line which passes through Salida, Modesto, Ceres, Keyes, and Turlock and operations on the branch line on the west side of the county, which passes through Wesley, Patterson, Crows Landing, and Newman. Based on noise measurements in Ceres and near the northern county line, there are approximately 16 freight train movements per day on the main line. Trains are evenly distributed throughout the day and night, with approximately 54% daytime operations (7:00 am to 7:00 pm), 13% evening operations (7:00 pm to 10:00 pm), and 33% nighttime operations (10:00 pm to 7:00 am). The UPRR main line runs adjacent to SR 99 for the majority of its route through Stanislaus County. Based on measured noise levels along the tracks, the calculated distance from the center of the mainline to the 60 dBA  $L_{dn}$  railroad contour is approximately 680 feet for existing (2004) operations.

b. Burlington Northern and Santa Fe (BN & SF) Railway

Operations on the BNSF Railway in Stanislaus County occur on the mainline which runs through Riverbank, Hughson, Empire, and Denair, and on a branch line which connects the mainline at Riverbank with the with the Sierra Railroad in Oakdale. According to noise measurements made in and just north of Hughson, approximately 33 train movements take place each day with approximately 54% daytime operations (7:00 am to 7:00 pm), 11% evening operations (7:00 pm to 10:00 pm), and 35% nighttime operations (10:00 pm to 7:00 am). Train movements ranged from a few seconds up to more than two minutes in duration. Based on measured noise levels along the tracks, the calculated distance from the center of the mainline to the 60 dBA  $L_{dn}$  railroad contour is approximately 950 feet for existing (2004) operations.

c. Sierra Railroad

The Sierra Railroad operates between Oakdale and Standard and includes both freight and passenger trains. Freight trains are operated by Union Pacific and Burlington Northern Santa Fe and usually operate roughly three times per week. Passenger trips travel between Oakdale and the eastern Stanislaus County Line and include entertainment style railroad travel approximately 3 to 5 times per week with most trips occurring Thursday through Sunday. Additional trips are scheduled during holidays. Based on the noise measurement survey made east of Oakdale, 1 to 3 freight train movements take place each day with approximately 75% daytime operations (7:00 am to 7:00 pm) and 25% nighttime operations (10:00 pm to 7:00 am). Railroad and horn noise levels are clearly audible in areas of the county adjacent to the tracks, but they occur infrequently. The 60 dBA  $L_{dn}$  contour for this operation is approximately 80 feet from the centerline of the railroad for existing (2004) conditions located away from grade crossings.

d. Modesto and Empire Traction Company Railroad

The Modesto and Empire Traction Company is a short-line railroad which connects switching operations between the UPRR Railroad in Modesto and the AT&SF Railway in Empire. A typical train can vary from lone locomotives to 4-5 car trains, up to 60 car trains. Train speed is limited to a maximum of 20 mph, with an average speed of 1 mph. Train operations typically occur 24 hours per day from 11 pm on Sunday through 8 am on Saturday, with occasional train movements over the weekend. Operations are split into three shifts, with one crew working the 7 am to 3 pm shift, two crews working the 3 pm to 11 pm shift, and two crews working the 11 pm to 7 am shift. Train trips per day vary greatly, with lighter operations occurring during the daytime 7 am to 3 pm shift.

Source: Ken Beard, Modesto and Empire Traction Company, telephone interview, September 7, 2004.

e. Tidewater Southern Railroad

The Tidewater Southern Railroad is a branch line operation of the Union Pacific Railroad. The line runs in a general north-south route through Stanislaus County passing through Del Rio, Modesto, and Turlock. The portion of the line from just south of Bangs Avenue through Modesto to Bonniefair was abandoned in 2000 and sections were removed or paved over in 2003. North of Bangs Road, operations typically occur 3 days per week on Tuesday, Thursday and Saturday. However, service may be operated more or less frequently depending on demand. According to noise measurements made south of Del Rio, approximately 6 train movements take place each day, with occasional evening and nighttime movements. The southern end of the line is served out of Rogers Holding Yard in Ceres and by unit grain trains directly off the former Southern Pacific rail line from Fresno. The 60 dBA  $L_{dn}$  contour for this operation is approximately 140 feet from the centerline of the railroad for existing (2004) conditions located away from grade crossings.

Source: Jim Smith, Union Pacific Railroad, telephone interview, October 8, 2004.

**6. Airports**

Aircraft noise in California is described in terms of the community noise equivalent level (CNEL). As mentioned previously, CNEL is approximately equivalent to the day/night average noise level ( $L_{dn}$ ) but includes a 5 dB weighting factor for the evening hours (7:00 PM to 10:00 PM). CNEL contours for operations at the Oakdale Municipal Airport, Patterson Airport, Turlock Airport, and Modesto City / County Airport were derived from the existing Airport Master Plan reports as available. Noise contours for the Crows Landing Naval Auxiliary Landing Field are not included in this report because, at the present time, the airfield is not in use and future plans for the airfield were unavailable.

a. Modesto City/ County Airport (Harry Sham Field)

The information for this portion of the report was compiled from the 2003 Airport Master Plan. The Modesto City/ County Airport serves as the primary commercial service airport for Stanislaus County and includes two runways in a 28L and R – 10L and R configuration. In 2001, the airport included 89,832 total operations, with 43,574 passengers, 591,518 lbs. total freight, and 177 based aircraft. Operations are predicted to increase to 141,180 by the year 2022. Approximately 84

percent of Modesto Airport operations in 2001 occurred during daytime hours (7:00 am to 7:00 pm), 15 percent occurred during evening hours (7:00 pm to 10:00 pm), and one (1) percent occurred during nighttime hours (10:00 pm to 7:00 am). The Modesto City/ County Airport includes air carriers, general aviation, and military operations. Itinerant general aviation accounts for approximately 62 percent of total general aviation operations, with 74 percent single engine aircraft, 9 percent multi-engine aircraft, 12 percent turboprops and jets, and 4 percent helicopters. The fleet mix transition over the past decade has been a move to high performance aircraft such as propjets and turbo fan aircraft and this is expected to continue into the future years. The 2001 Master Plan contours are shown in Figure A-22 in Appendix A.

Source: Modesto City-County Airport (Harry Sham Field) 2002 Airport Master Plan, prepared by Coffinan Associates.

b. Oakdale Municipal Airport

The information for this portion of the report was compiled from the 2003 Airport Master Plan. The Oakdale Airport is composed of 117 acres of land with one paved runway. The east-west runway 10-28 is 3,020 feet long and can handle only small general aviation aircraft. The airport is located approximately two miles east of Oakdale City boundaries and the site is owned by the City of Oakdale. Land uses surrounding the airport are generally agricultural, with some rural residential uses. A few of these residences are located along Laughlin Road, the access road to the airport. The land surrounding the airport is currently zoned for agricultural uses and no residential uses fall within the 65 CNEL contour.

The airport is not considered particularly busy, except on summer weekends, and aircraft operations have not been counted on any continuing basis. The vast majority of operations are by single-engine aircraft, with approximately 60% local operations and 40% itinerant operations in 1995. Of these, approximately 4% of all operations were estimated to be by twin-engine aircraft and 0.5% by business jets. It was forecasted in 1995 that by the year 2015, there would be 80 based aircraft and 51,380 total operations, with a peak hourly runway demand of 39 under the runway-use configuration actually utilized and 5 under a single runway use configuration. It is assumed the single runway condition will occur for approximately 10% of the year and will not continue over a long period of time. A runway extension has been proposed to increase the existing runway to 4,400 feet, but has not been completed (as of August 2004). Future contours were calculated with and without the runway extension and it was found that there was an improvement in the CNEL contours with the extension, since the most active runway 28 will shift east away from developed areas. The 1996 Master Plan contours are shown in Figure A-23 in Appendix A with the runway extension.

Source: Oakdale Municipal Airport 1996 Airport Master Plan, prepared by Wadell Engineering Corporation.

c. Patterson Airport

The Patterson Airport is a small airport; built on approximately 30 acres with a runway (34/16) that is less than 2000 feet long. Small turbine-powered or reciprocal engine agricultural planes are the typical users, and planes of about 8,000 to 10,000 lbs gross weight are the largest that are able

to operate on this small runway. The majority of land use in the vicinity of the airport is agricultural, with the nearest noise sensitive areas located within the City of Patterson and more than a quarter mile from the airport. The 2001 Draft EIR for the City of Patterson does not include the airport as a significant noise source. Additionally, it is likely that the airport will be annexed to the City of Patterson by January 2005. Noise contours were not prepared for this airport. Based upon the airport size and operations, it is expected that the 60 dB CNEL contour for this airport is located very close to the airport so no noise sensitive land would be affected.

Sources: Patrick Bodin, City of Patterson, August 2004.

West Patterson Master Development Plan Draft EIR, prepared by Crawford Multari & Clark Associates.

d. Turlock Airpark

Turlock Airpark is a small, public use airport with a few based aircraft. The airport is located just south of State Route 99, with portions of the airport located in both the City of Turlock and unincorporated Stanislaus County. Within county lands, the land use is primarily agricultural. The limited runway length prevents large aircraft and jets from using the airport, so that the majority of airport use is by single engine aircraft and ultralight aircraft. Twenty single engine aircraft and twelve ultralight aircraft are based at the Turlock Airpark. Noise contours were not prepared for this airport. Based on the limited capacity of the airport, it is estimated that the 60 dB CNEL contour for this airport lies within the airport boundaries so that noise sensitive uses are not significantly impacted.

Source: Michael Cooke, Planning Department, City of Turlock, August 2004.

e. Former Crows Landing Naval Auxiliary Landing Field (NALF)

The former Crows Landing Naval Auxiliary Landing Field is completely surrounded by Stanislaus County land. The site contains approximately 1,500 acres of land between Patterson and Crows Landing. Much of the facility property and most of the surrounding area is used for agriculture. The former NALF Crows Landing was commissioned in May 1943 and served primarily as an auxiliary airfield for operations from Naval Air Station, Moffet Field. The Navy closed the facility in 1994 it was transferred to NASA on July 1, 1994. In October 1999, NASA was authorized by to transfer the facility to Stanislaus County. At this time, NASA is no longer using the airfield and the property should be transferred to the County by the end of 2004. Noise contours were not prepared for this airport. There no current plan for the air field at this time, but a new Master Plan may eventually be prepared if the county decides to operate a General Aviation airport at this location.

Source: Proposed Plan NASA Crows Landing, June 1999, prepared by the Navy, Engineering Field Activity West.

Debra Whitmore, Senior Planner, Planning and Community Development, Stanislaus County, August 2004.

## 7. Industrial and Other Stationary Noise Sources

Noise is inherent to many industrial processes, even with the best available noise control technology. Updated noise exposure information for major industries in the unincorporated areas of Stanislaus County was developed from operational information obtained from plant operators. The industrial areas represented in this document are intended to identify noise sources that are located near noise sensitive land uses. The industrial areas are grouped into three categories; (1) those which are outside of any sphere of influence, but near County development, (2) those located within a sphere of influence, and (3) those located in the County agricultural zone, away from development. The main focus of this section of the document is on industry located outside of any sphere of influence, but near County development. Facilities located within a sphere of influence and near noise sensitive uses would be included in the applicable City Noise Element document.

### Outside City Spheres of Influence, Near County Development

#### a. Berry Feed and Seed Company, Keyes

The Berry Feed and Seed facility receives and processes grain products for seed and animal feeds. Products are received by truck and rail. Major on-site noise sources include material and air handling fans, hammermills, roller mills, and heavy truck movements. The majority of the equipment is located inside a steel structure. Operations are conducted 24-hours per day year round. Residences located south of the facility have been purchased by Berry Feed and Seed and are used as company offices, storage, and liquid feed containers. The 60 dBA  $L_{dn}$  noise contour for this facility is estimated to be approximately 1550 feet from the center of the plant as specified in the 1987 documentation.

Source: Bruce Pace, Director of Safety and Environmental Affairs, Berry Feed and Seed, Telephone Interview, February 16, 2005.

#### b. California Almond Growers Exchange, Salida

The California Almond Growers Exchange is an almond receiving, processing, and storage facility. Noise generating operations include an almond shelling process, heavy truck movements, elevators, dust collectors, and conveyers. The plant typically operates 5 to 6 days per week during the hours of 6:00 am and midnight during almond harvesting season (September through November). Based on noise measurements conducted in 1986 during the off-season (BBA, 1987) an elevator generates noise levels of approximately 65 to 66 dBA at a distance of 900 feet from the operations and the processing equipment generates noise levels of approximately 66 dBA at a distance of 200 feet from the receiving area of the plant. The almond shelling process (an addition since 1986) is not expected to be distinguishable above noise levels already generated on the site by the other equipment. Noise levels would be higher during peak season, when there are large numbers of trucks and all stationary equipment is in full operation.

Source: Bill Weaver, Plant Manager, California Almond Growers Exchange, February 2005.

c. Dompe Company Warehouse, Crows Landing

The Dompe Warehouse is located adjacent to the Grisez Warehouse and used mostly as a storage facility. There are no major noise sources at the facility. Bean cleaning and treatment is performed at this facility during harvest season. The 60 dBA  $L_{dn}$  noise contour for this facility is expected to be located entirely within the property boundaries. Nearby noise sensitive uses are not significantly impacted by this facility, but may be impacted by the adjoining Grisez facility.

Source: Barbara Troesch, Accounts Payable, Dompe Company Warehouse, Telephone Interview, January 20, 2005.

d. Flory Industries, Salida

Flory Industries is a manufacturing and fabrication plant located west of Salida. The facility manufactures equipment including nut harvesters and sweepers, sprayers, blowers, and agricultural implements. The shop operates in three shifts 5 to 6 days per week; a daytime shift from 7:00 am to 3:30 pm, a swing shift from 4:00 pm to 12:30 am, and a smaller graveyard shift from 11:30 pm to 8:00 am. Most manufacturing operations are located within buildings, but steam cleaning and heavy duty riveting are performed outdoors. Noise sources which were audible at the property line during the 1987 survey included forklifts, trucks, welding and grinding operations, steam cleaning, and the compressor and pump operations. The airstrip previously located on the property and used for operations has been removed. Based on the removal of the airstrip and the previous 1987 technical noise document findings, the 60 dBA  $L_{dn}$  noise contour for this facility is expected to be located entirely within the property boundaries.

Source: Rodney Flory, Senior Partner and Treasurer, Flory Industries, January 2005.

e. Grisez Warehouse, Crows Landing

The Grisez warehouse complex includes three mills enclosed in separate buildings. Only one of the three mills is currently in use, with the additional two buildings being used as storage. The facility stores, cleans, and treats lima, baby lima, and baby green beans, as well as black eyed peas. Major noise sources include the one operating mill, ventilation fans, deliveries, and forklift operation. Approximately two heavy truck deliveries take place each week. The facility is typically operated from 7:00 am to 5:00 pm during the off-season and from 7:00 am to 7:00 pm during harvest season. Operations have decreased from the 1987 (when all three mills were running), but could conceivable return to previous operations. The 60  $L_{dn}$  contour during peak season mill operations is estimated to be approximately 830 feet from the center of the milling equipment as specified in the 1987 documentation.

Source: Barbara Troesch, Accounts Payable, Dompe Company Warehouse, Telephone Interview, January 20, 2005.

f. Modesto Sand and Gravel, Modesto

Modesto Sand and Gravel is a demolition and excavation company which operates noisy equipment off-site. Heavy trucks, excavators, and loaders are sent out during daytime hours to the location of the demolition or excavation site. Equipment is stored on site when not in use and the only on-site noise sources would be vehicle movements moving to and from the facility. The 60



dBA  $L_{dn}$  noise contour for this facility is expected to be located entirely within the property boundaries.

Source: Grace Azevedo, Administrative Assistant, Modesto Sand and Gravel, Telephone Interview, February 15, 2005.

### **Inside City Spheres of Influence**

#### **g. Beard Industrial Tract, Modesto**

The Beard Industrial Tract includes a variety of industrial uses, including food processing plants and transportation sources. Primary noise sources include the Modesto and Empire Traction Company Railroad movements, Burlington Northern and Santa Fe (BN & SF) Railway movements, traffic along Yosemite Boulevard, and aircraft operations at the Modesto City/ County Airport (all discussed previously). South of the tract, the noise environment is generated primarily by industrial noise sources. It is likely that the 60 dBA  $L_{dn}$  noise contour for Beard Industrial Tract would be located within the tract boundaries. However, due to seasonal variations in operations and the many variables associated with the tract, it is recommended that detailed studies of current source operations be conducted whenever potentially noise sensitive land uses are proposed nearby.

#### **h. Bonzi Landfill**

The Bonzi Landfill operates from 6:00 am to 6:00 pm on 5-days per week with occasional Saturday operations and is not open to the public. Operations include the storage, recycling, and disposal of industrial wastes. Heavy trucks are used for waste handling and transportation to and from the site, with a limited number of nighttime truck activities (1-2). Nearby residences are approximately 150 yards from the working area and are acoustically shielded by berms and a block wall. The major noise source at these residences is heavy truck movements on Hatch Road.

Source: Steve Bonzi, General Manager, Bonzi Landfill, Telephone Interview, February 16, 2005.

#### **i. Gallo Winery, Modesto**

The Gallo Winery and Gallo Glass Company is a large industrial complex located east of Dry Creek, between Yosemite Boulevard and the Tuolumne River, and within the Modesto sphere of influence. No major changes in operations have occurred in the complex since 1986. Operations occur on a 24-hour per day basis, 365 days per year and include cooling towers, refrigeration equipment, and various types of small and large fans. In addition, heavy truck movements occur in some areas. Bottling operations are enclosed within the buildings. Based on noise measurements conducted in 1987 (BBA, 1987), noise levels at or near the plant boundaries typically range from approximately 55 to 70 dBA during periods of normal operations.

Source: Derrick Jarvis, Operations Manager, Gallo Winery, January 2005.

### **Agricultural Zone, Away From County Development**

**Santa Fe Aggregates, Inc, Waterford Plant**

The Santa Fe Aggregates Waterford Plant is a sand and gravel extraction and processing plant, located approximately 5 miles east of Waterford. Extraction, crushing, and screening operations typically occur weekdays between the hours of 6:00 am and 11:00 pm during peak season (June through October), and 7:00 am to 5:00 pm during off season, with occasional Saturday operations during peak season. The asphalt plant typically operates 4 days per week in peak season with a start up time of 6:00 am and 2 days per week during off-season with a start up time of 7:00 to 8:00 am. The concrete batch plant is no longer in use and has not been used for many years. Extraction operations utilize a backhoe and a belt conveyer line to transport material between facilities. Crushing operations include two cone crushers and a vertical impact crusher. The plant is now on electric power and no longer uses a diesel generator. Based on the 1987 technical noise document findings and updated operations information and without taking acoustical shielding into account, the 'worst-case' 60 dBA  $L_{dn}$  noise contour for this facility is expected to be located approximately 600 feet from excavation and hauling activities and approximately 4500 feet from the center of the processing plant during asphalt plant operations. Shielding from the bluff along the river would be expected to reduce noise levels significantly in areas north of SR 132.

Source: Michelle Cunningham, Division Manager, Santa Fe Aggregates, Inc, Telephone Interview, February 15, 2005.

**8. Key Findings**

- a. Roadways, freeways, and railroads are the primary source of noise in Stanislaus County, with SR-99 and Interstate 5, the Union Pacific Railroad (UPRR), and the Burlington Northern and Santa Fe (BN & SF) Railway having the highest noise levels.
- b. Localized and intermittent noise impacts occur as a result of aircraft over flights and industrial noise sources.

***D. Future Noise Environment***

**1. Roadways**

Future (2030)  $L_{dn}$  noise levels were estimated based on traffic volume data provided by the Stanislaus County Department of Public Works. A tabulated summary of calculated distances to  $L_{dn}$  contours for existing and future conditions are shown in Tables B-1 and B-2 in Appendix B. The predicted future (2030)  $L_{dn}$  noise levels along state highways and major county roadways throughout Stanislaus County at a distance of 75 feet from the centerline of the roadway are mapped in Figure B-1 in Appendix B. Predicted  $L_{dn}$  values are "worst-case" estimates because they do not take acoustical shielding from buildings or terrain into account.

**2. Railroads**

Information on the future operations of the railroads was unavailable and future noise contours were not prepared. Existing noise contour distances can be found in Appendix A. These data are the best available to describe the existing and future noise environments along the rail corridors.

**3. Airports**

Predicted future CNEL contours for operations at the Oakdale Municipal Airport and Modesto City / County Airport were derived from the existing Airport Master Plan reports as available and can be found in Figure B-3 in Appendix B. The noise contour maps show the extent of airport noise for planning purposes in the vicinity of the airport.

**4. Industrial and Other Stationary Noise Sources**

Future operations at industrial facilities are dependant on many variables and information was unavailable to allow meaningful projections of noise. It is recommended that detailed studies of current source operations be conducted whenever potentially noise sensitive land uses are proposed for areas near existing industrial, commercial, or other stationary facilities which could generate significant noise levels.

*References*

The references listed here are in addition to those documented throughout the report.

Brown Buntin Associates, Inc., Technical Reference Document, Chapter 4: Noise, 1987.

Stanislaus County Year 2000 General Plan, Chapter 2: Circulation Element, 1987.

Stanislaus County Year 2000 General Plan, Chapter 4: Noise Element, 1987.

StanCOG, Program Environmental Impact Report, Regional Transportation Plan for Stanislaus County, Chapter 12 Noise, October 2001.

*E. List of Preparers*

Illingworth & Rodkin, Inc., an acoustics and air quality consulting firm, was contracted by Stanislaus County to conduct this noise study. The following individuals had substantial roles in conducting the noise study and in the preparation of this report:

- Richard Rodkin (Principal) developed study approach, provided oversight in field measurement locations, traffic noise modeling and report preparation tasks, and reviewed this document.
- Dana Lodico (Staff Consultant) directed field measurements, analyzed noise and traffic data, conducted traffic noise modeling, and was the author of the report.
- Clayton Anderson (Staff Consultant) conducted noise measurements.

## Appendix A: Existing Noise Sources

Figure A-1: Noise Measurement Locations

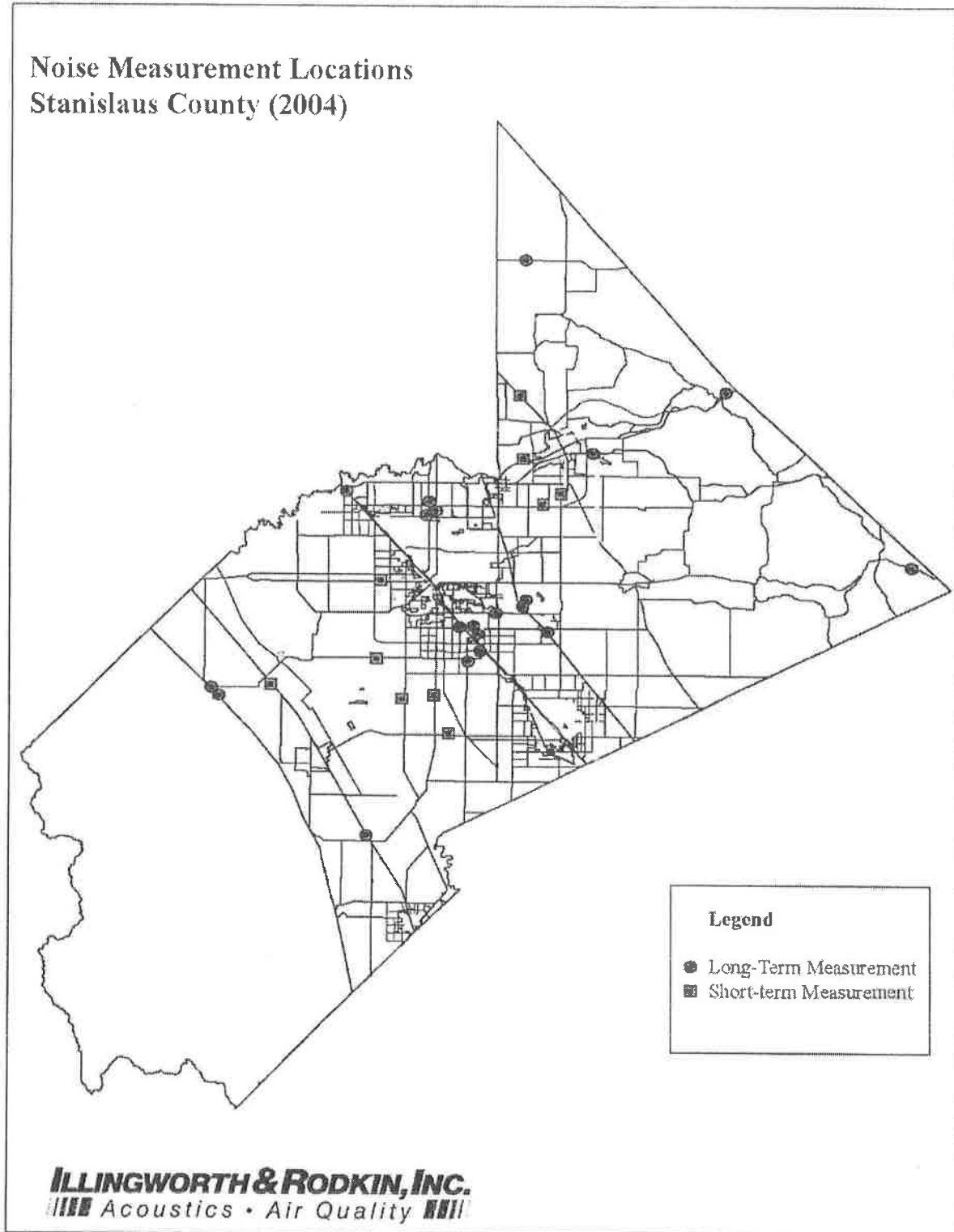




Table A-1: Summary of Long-Term Noise Measurements

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

Table A-2: 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 |   |         |                      | dBA             | 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 A-2: Daily Trend in Noise Levels at LT-1

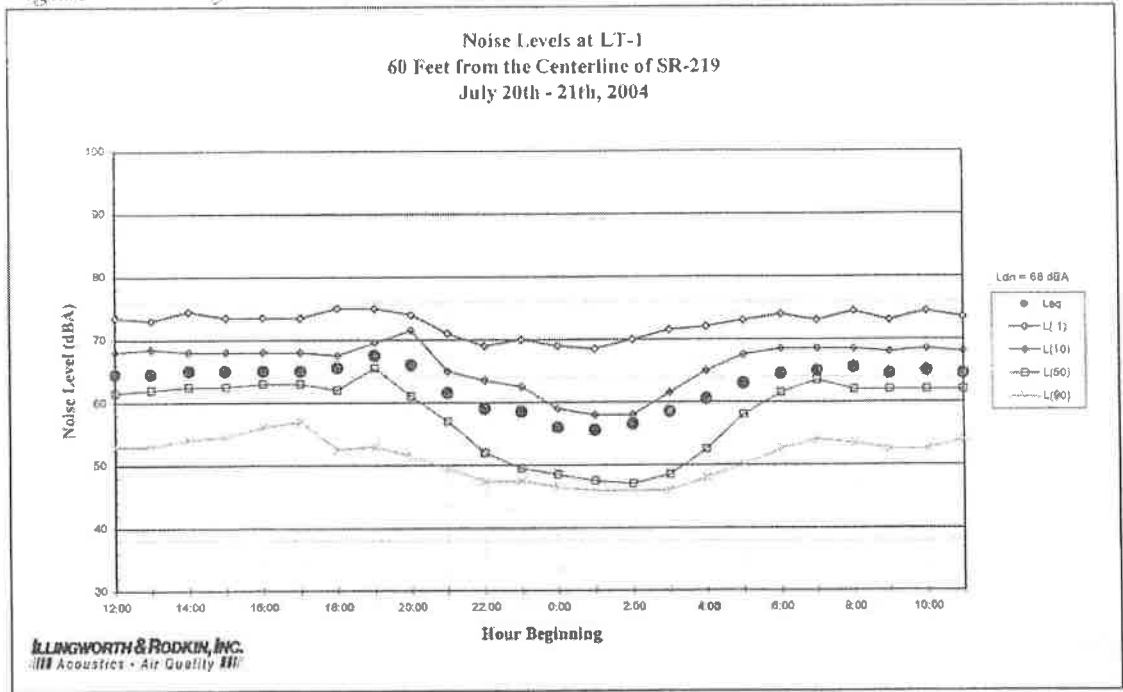


Figure A-3: Daily Trend in Noise Levels at LT-2

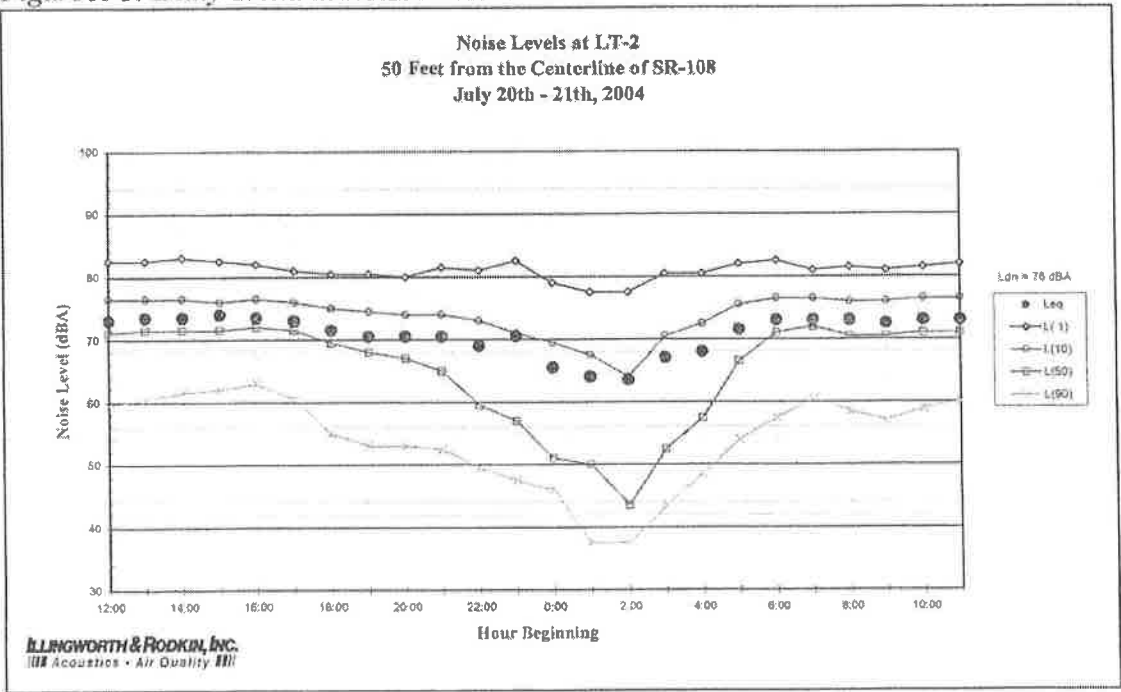


Figure A-4: Daily Trend in Noise Levels at LT-3

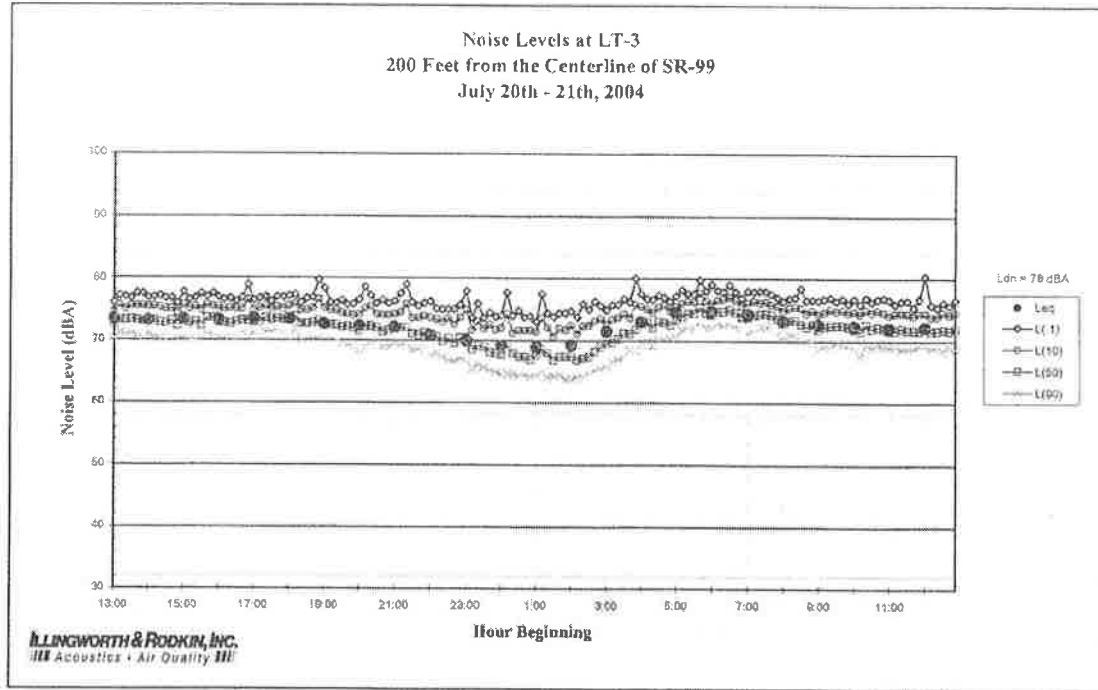


Figure A-5: Daily Trend in Noise Levels at LT-4

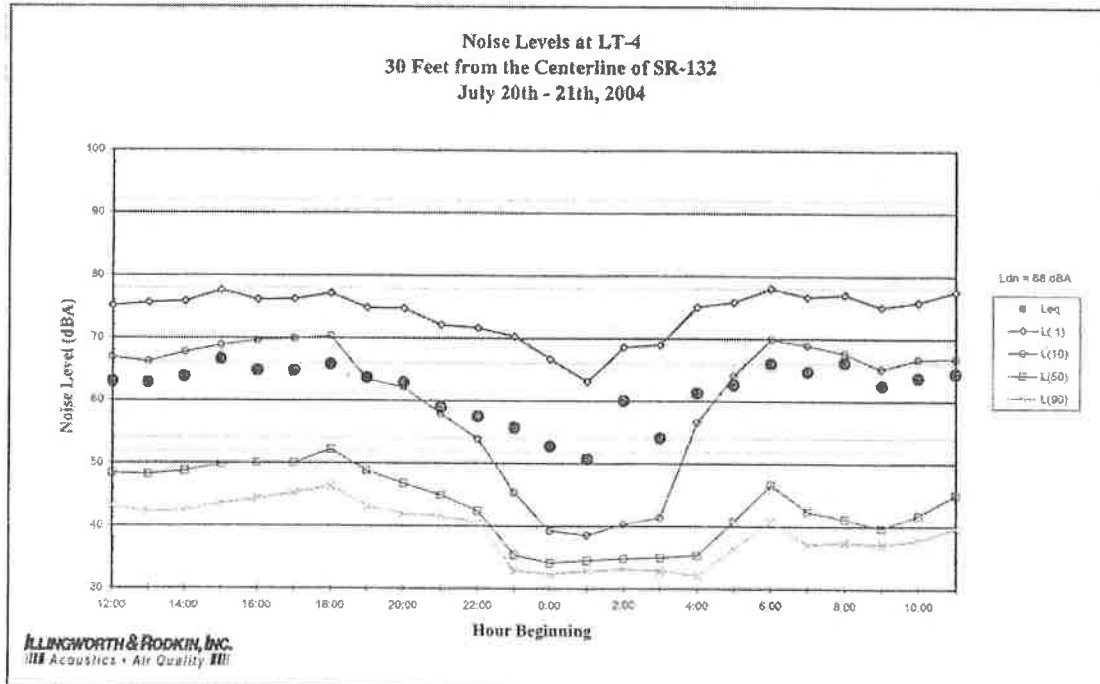


Figure A-6: Daily Trend in Noise Levels at LT-5

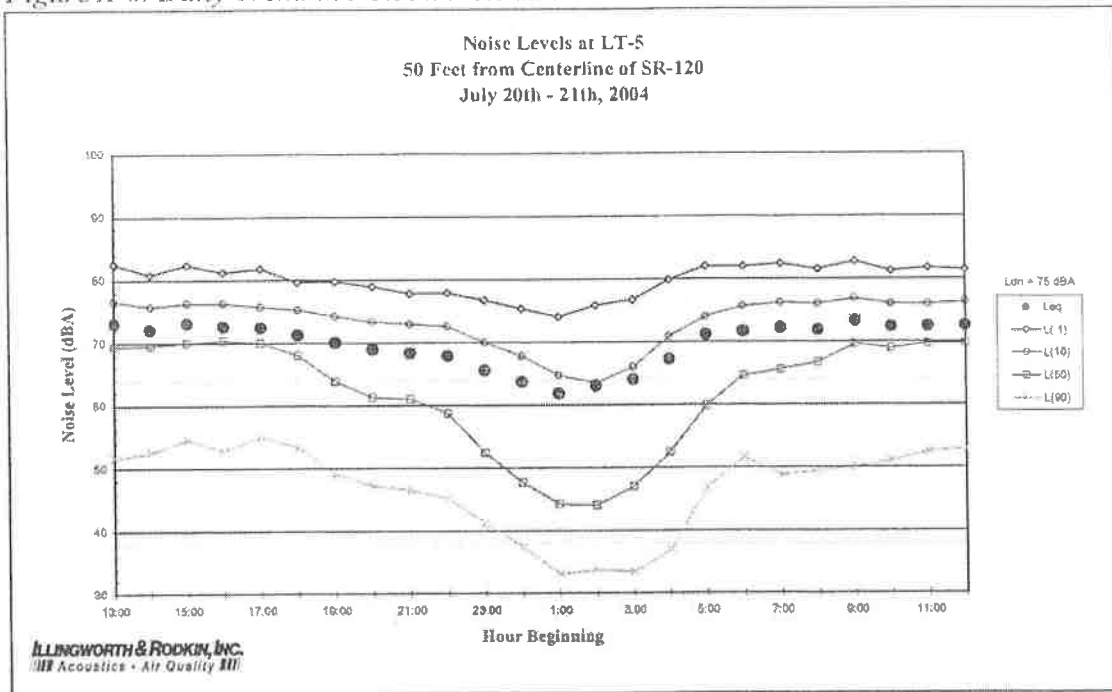


Figure A-7: Daily Trend in Noise Levels at LT-6

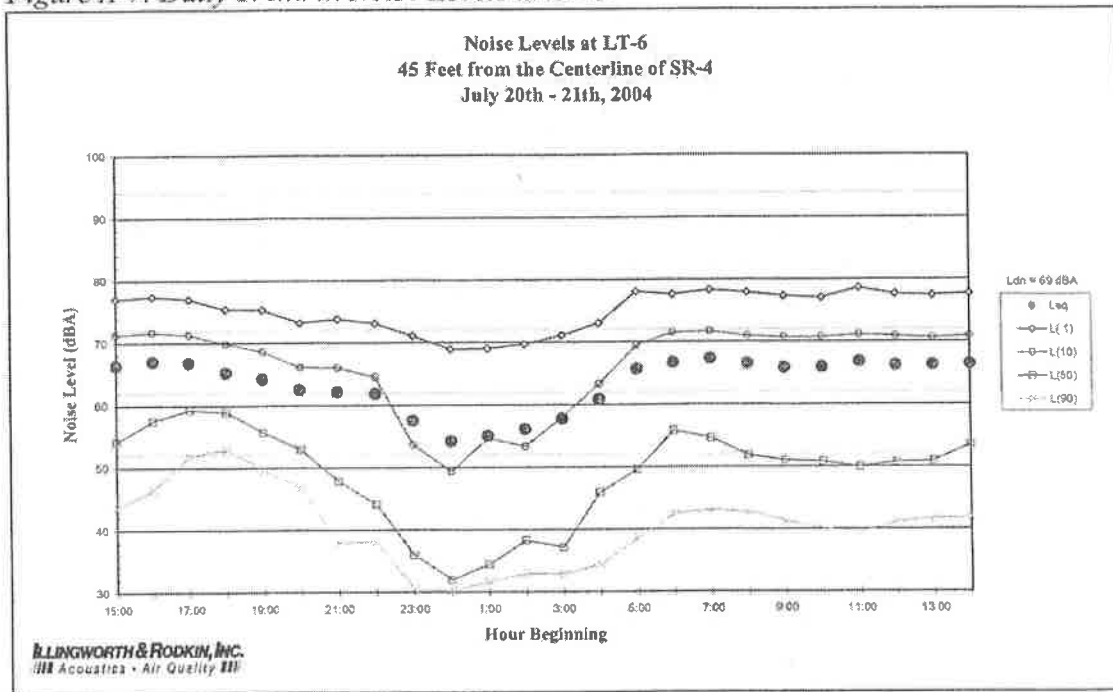


Figure A-8: Daily Trend in Noise Levels at LT-7

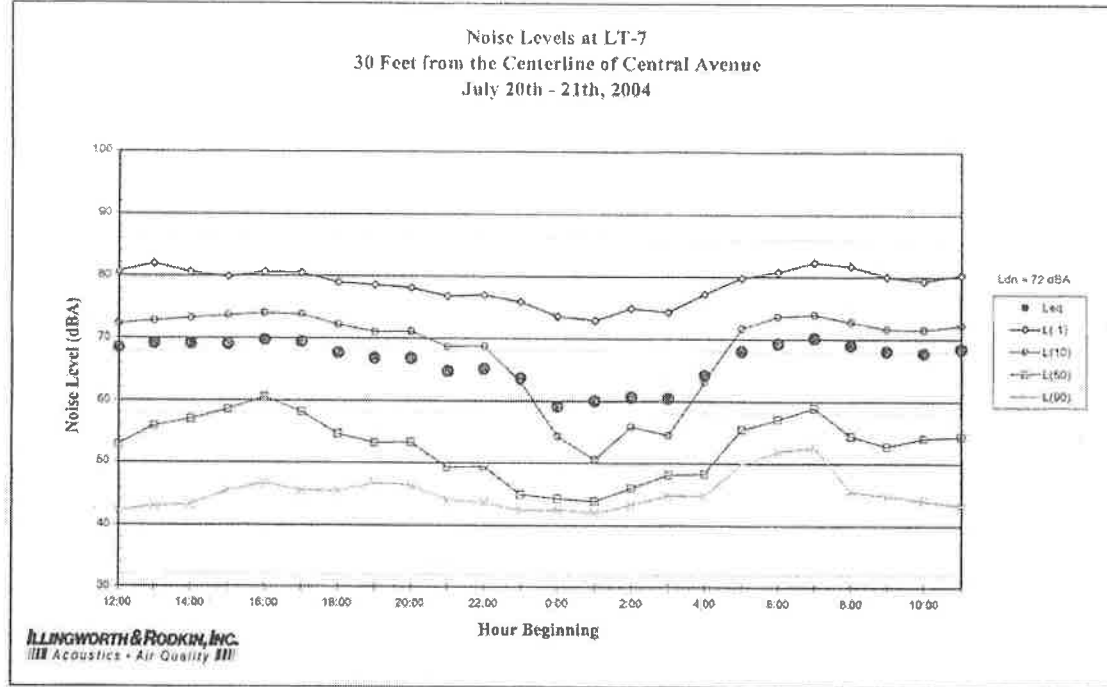


Figure A-9: Daily Trend in Noise Levels at LT-8

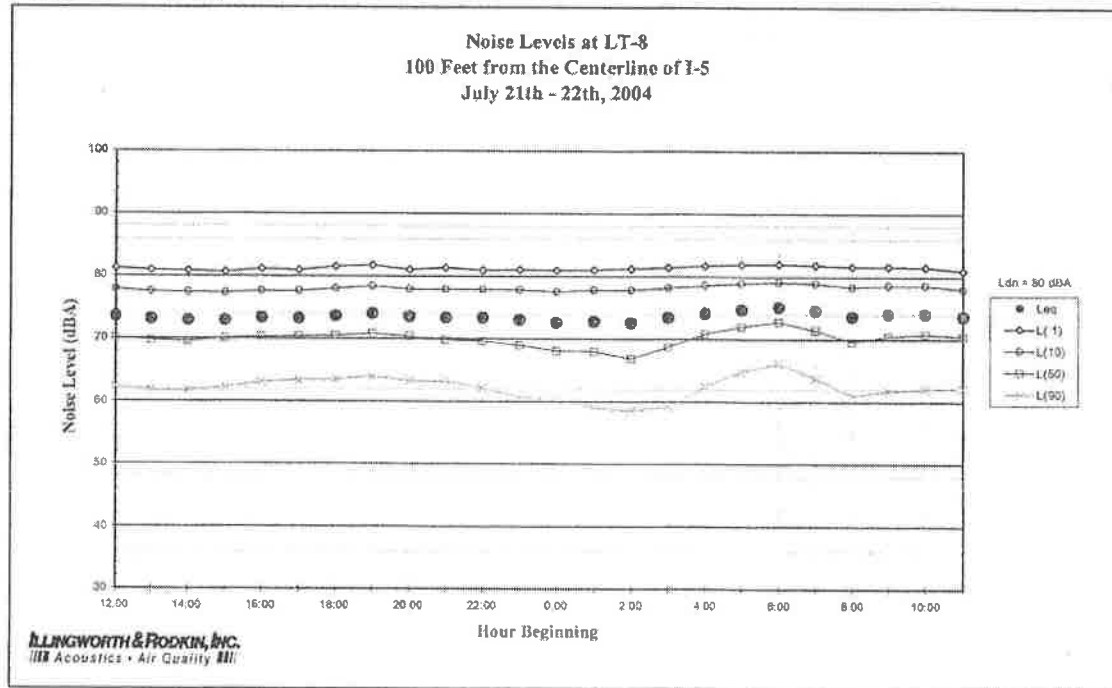


Figure A-10: Daily Trend in Noise Levels at LT-9

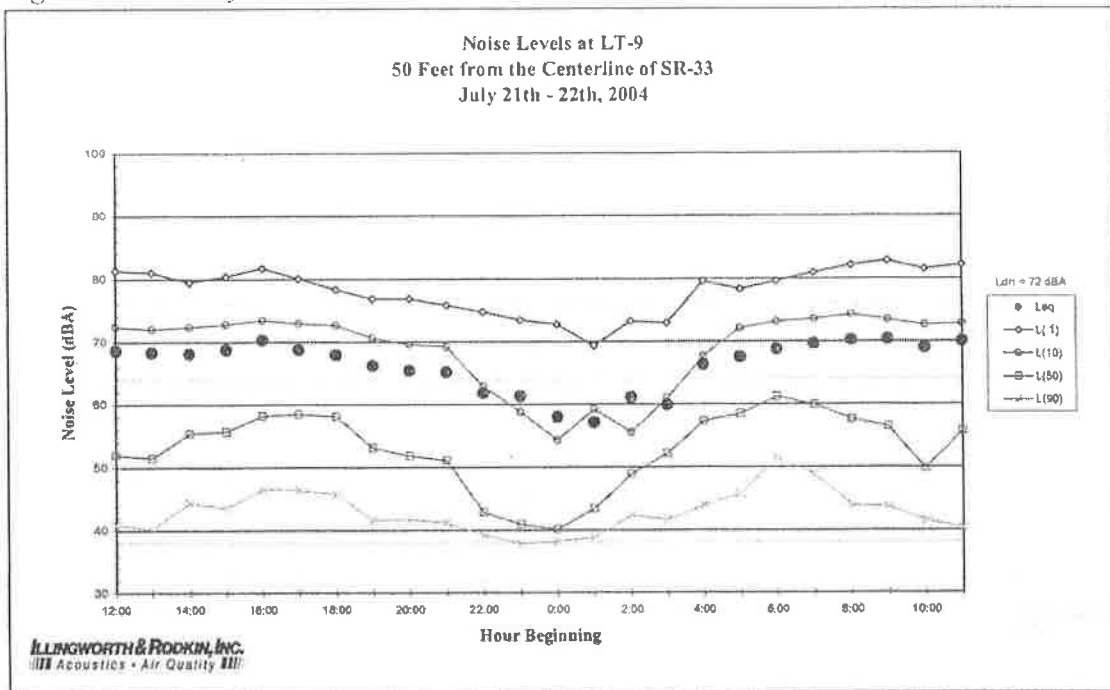


Figure A-11: Daily Trend in Noise Levels at LT-10a

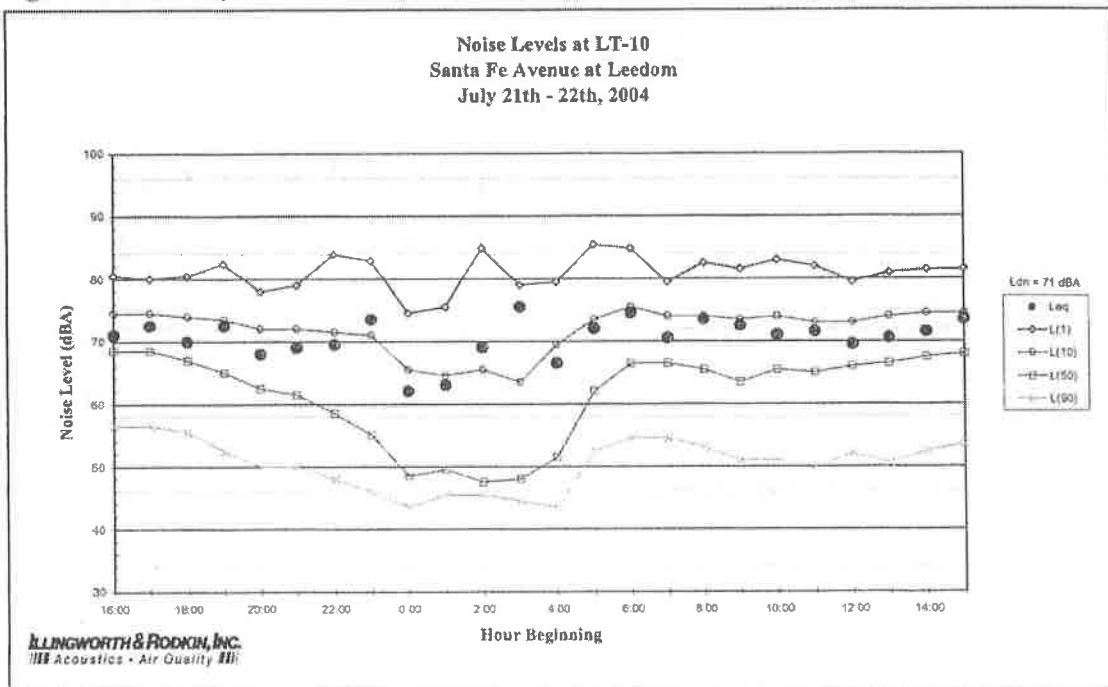




Figure A-12: Daily Trend in Noise Levels at LT-10b

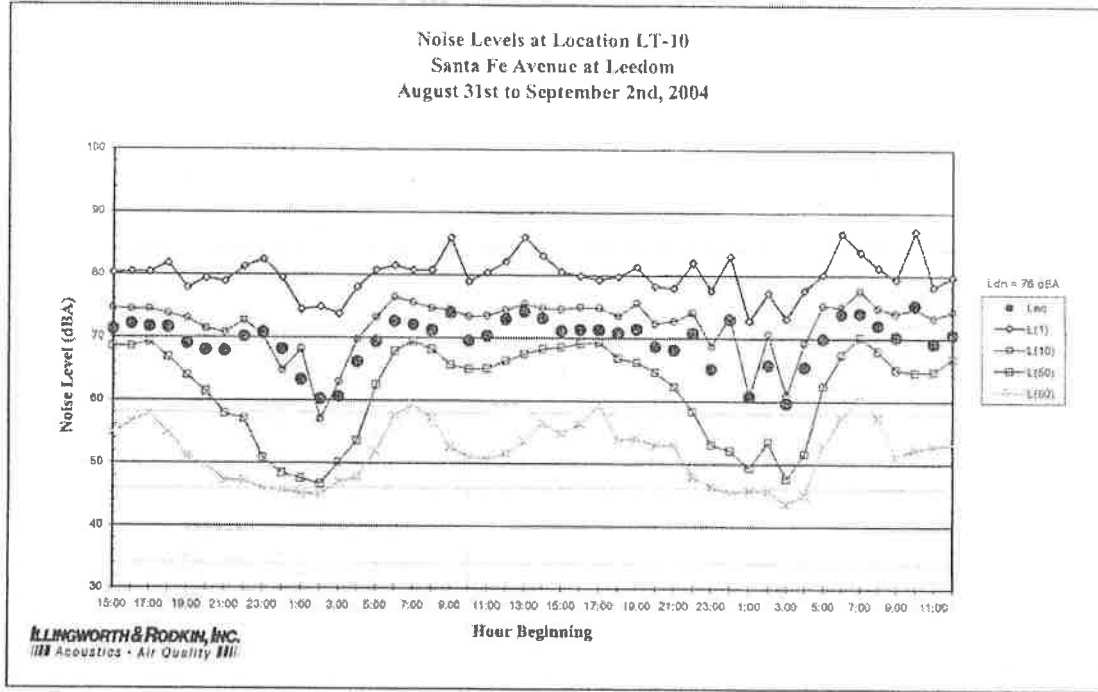


Figure A-13: Daily Trend in Noise Levels at LT-11

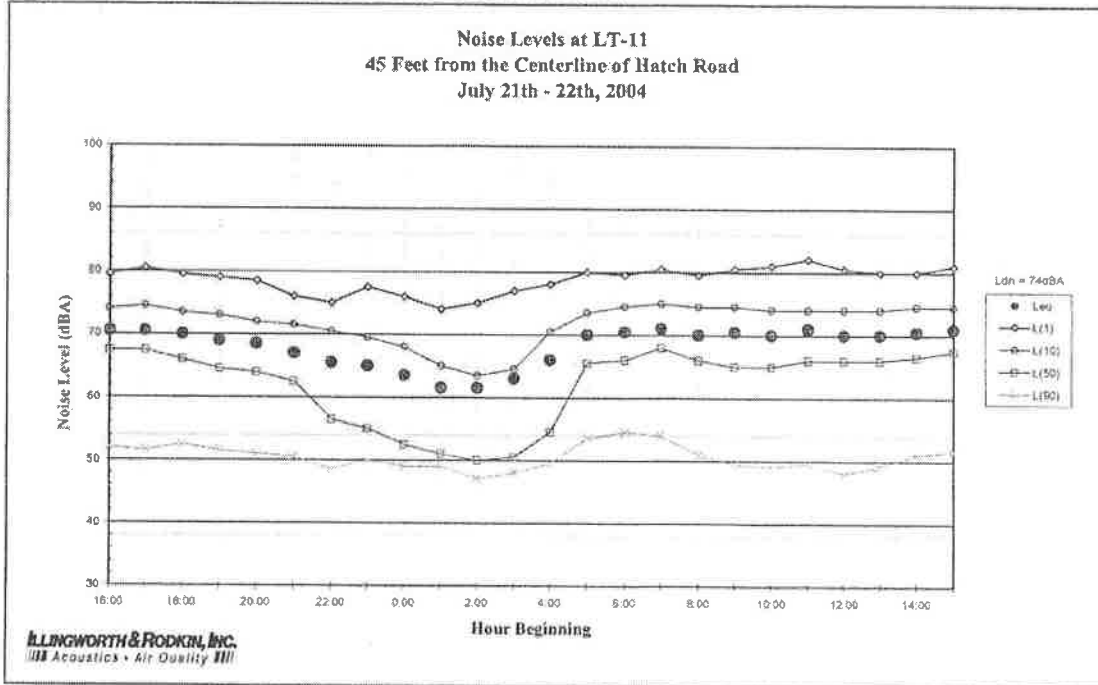


Figure A-14: Daily Trend in Noise Levels at LT-12

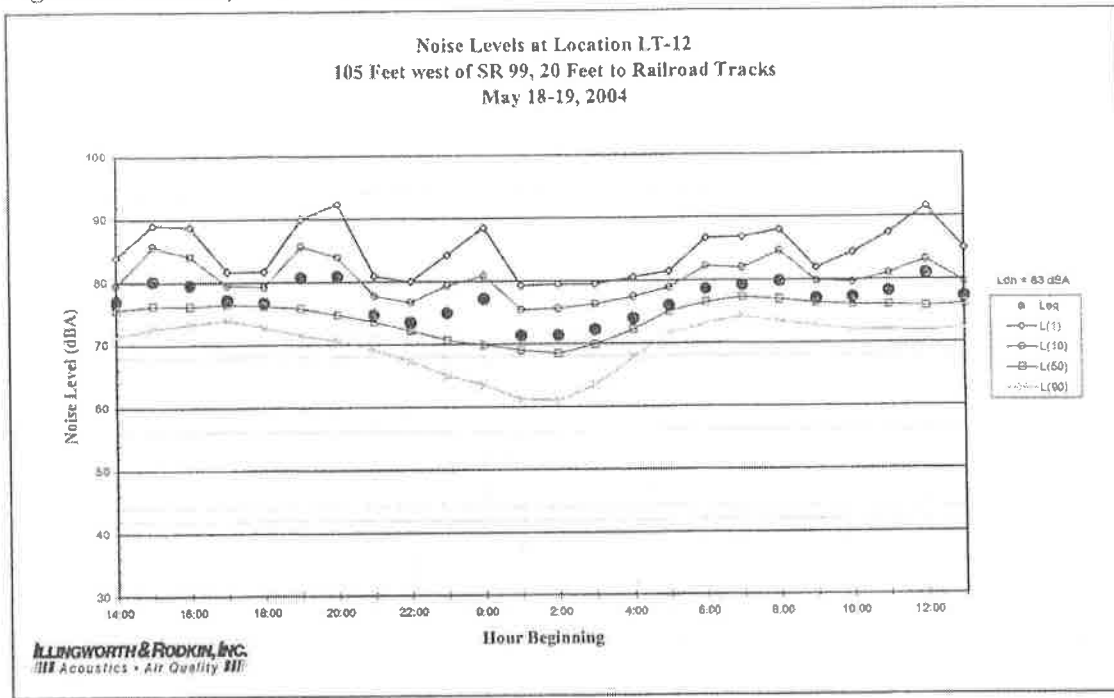


Figure A-15: Daily Trend in Noise Levels at LT-13

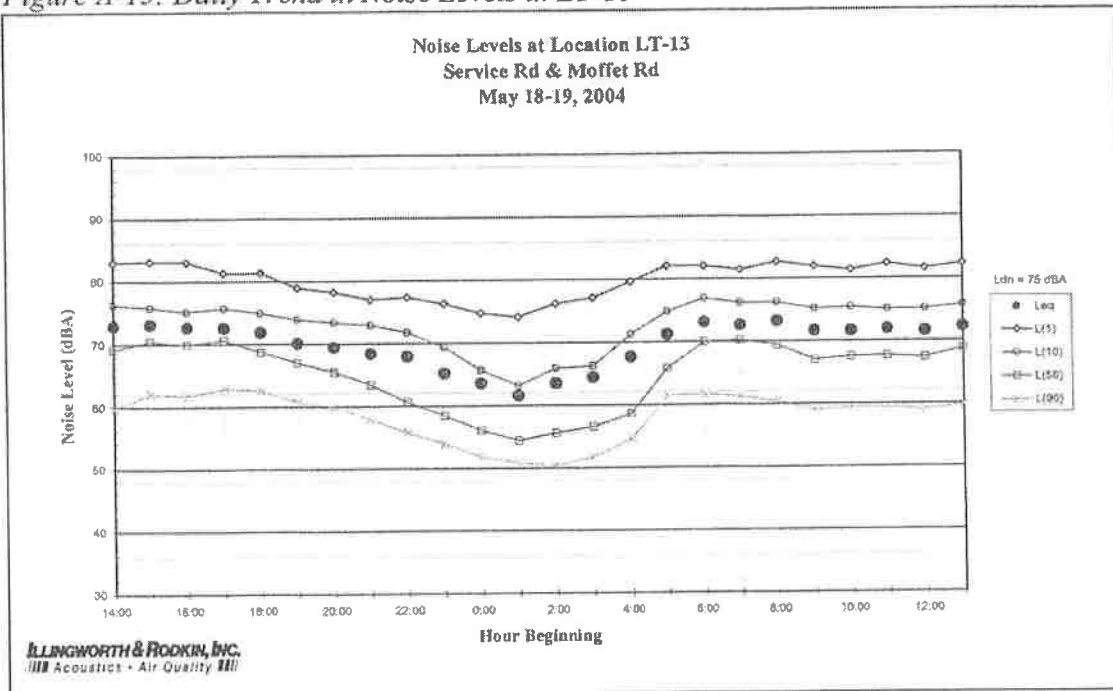


Figure A-16: Daily Trend in Noise Levels at LT-14

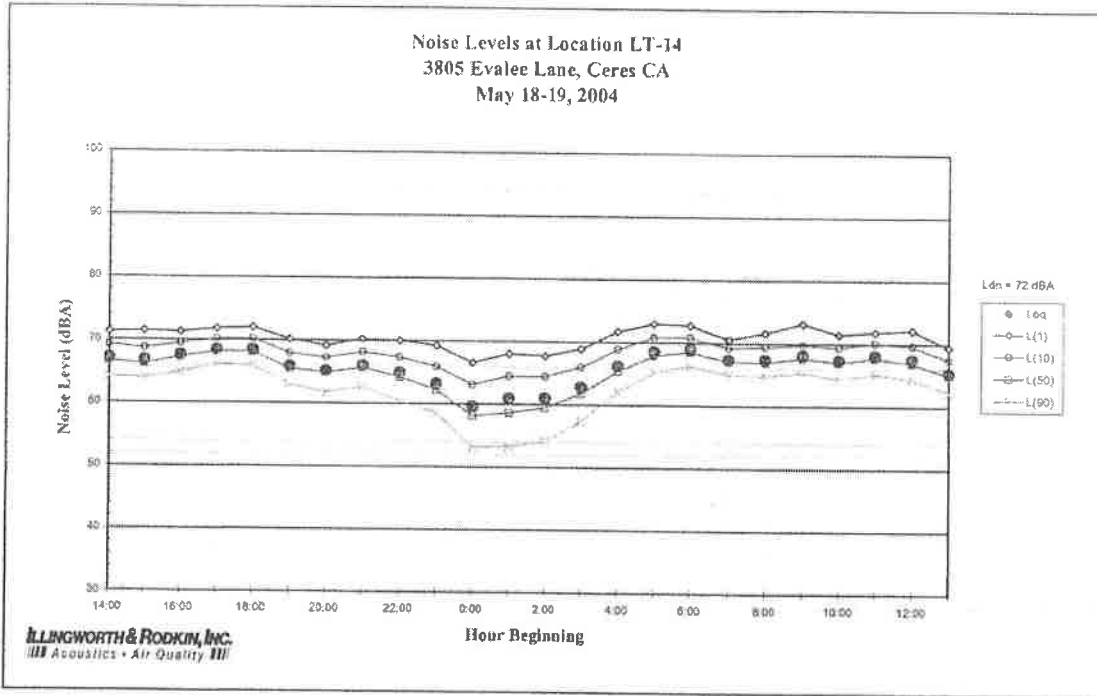


Figure A-17: Daily Trend in Noise Levels at LT-15

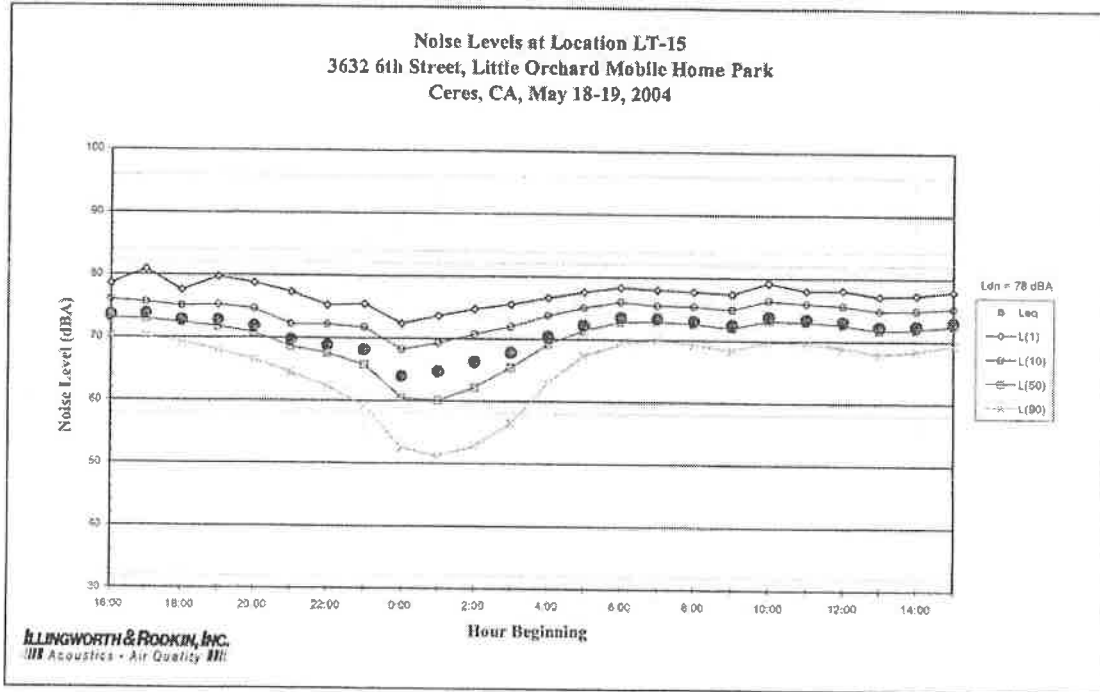


Figure A-18: Daily Trend in Noise Levels at LT-16

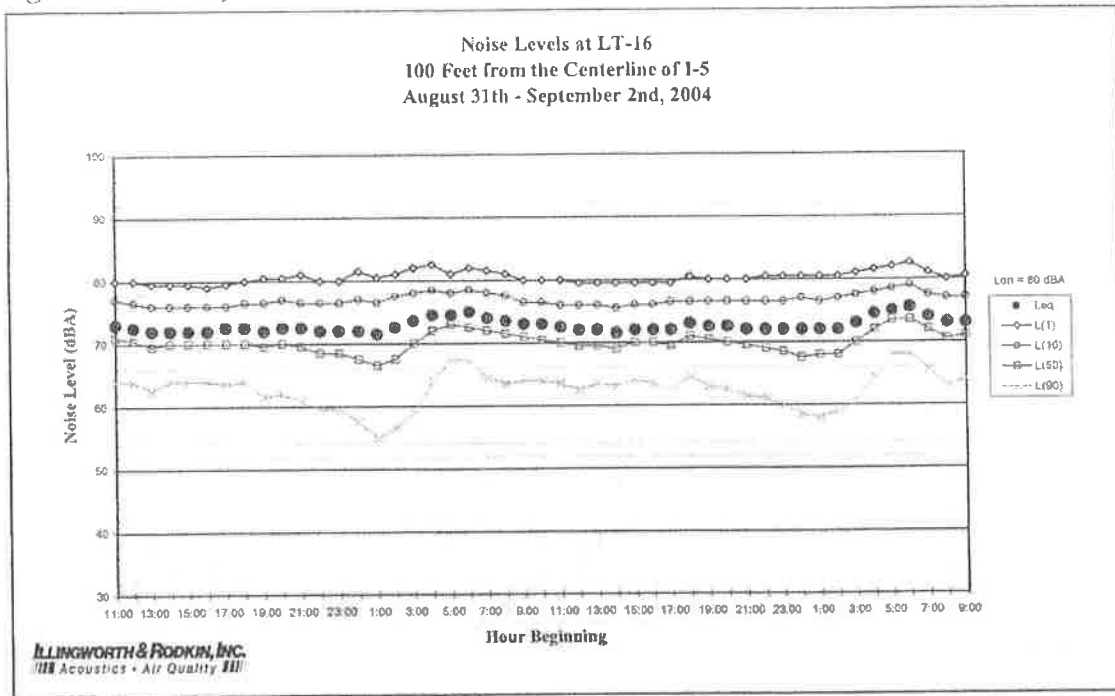


Figure A-19: Daily Trend in Noise Levels at LT-17

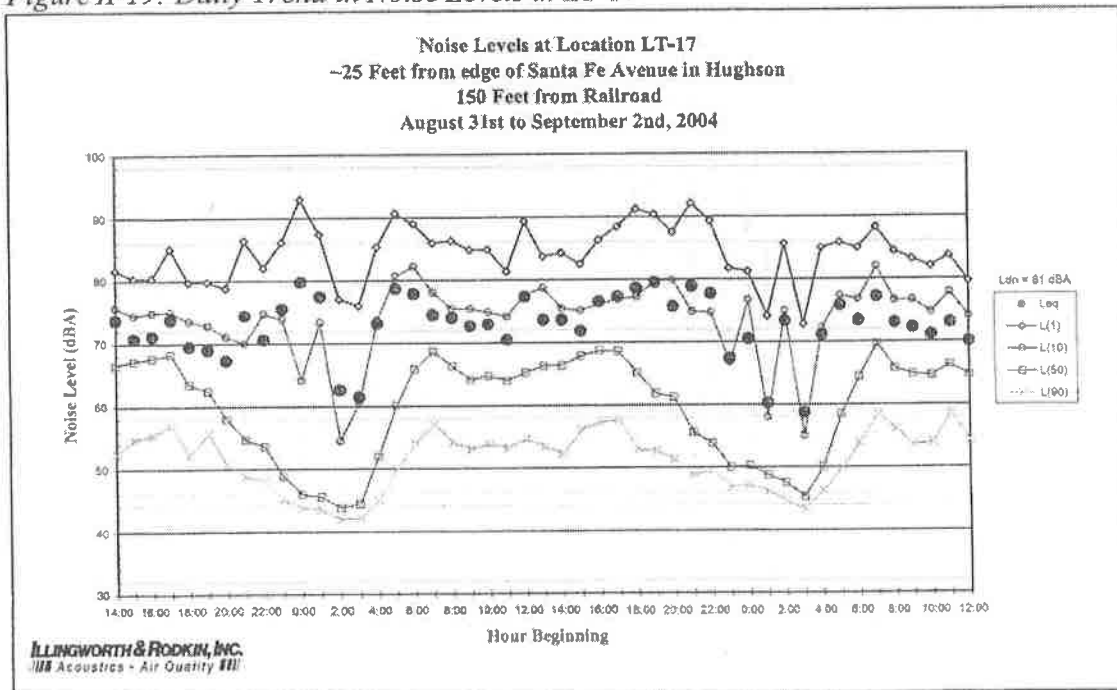


Figure A-20: Daily Trend in Noise Levels at LT-18

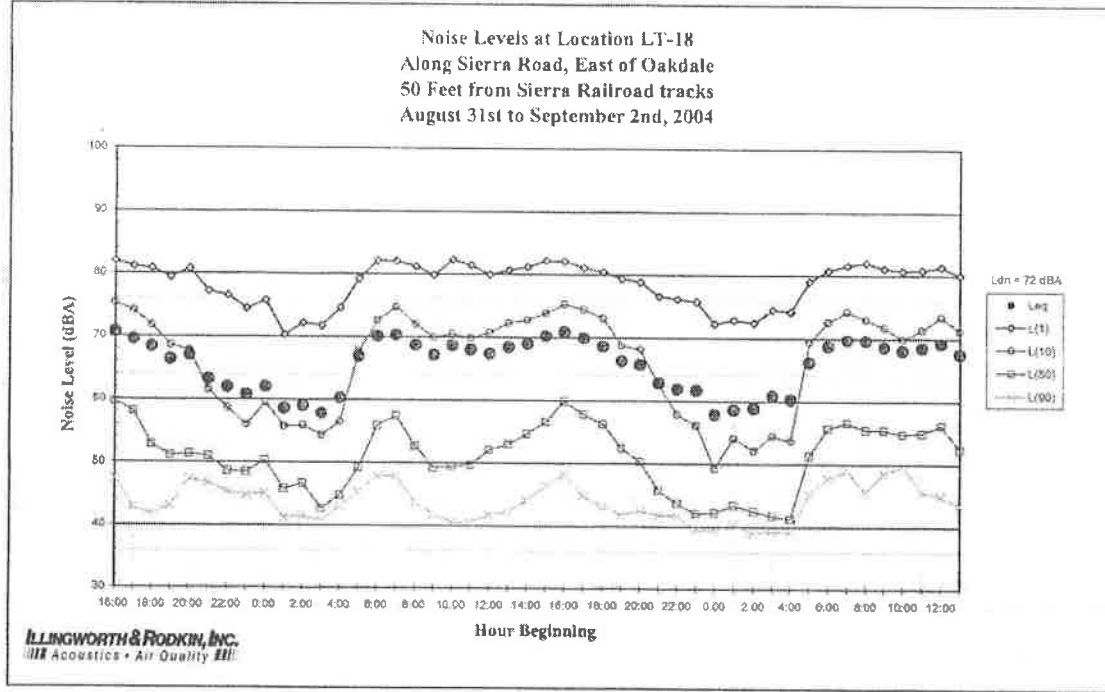
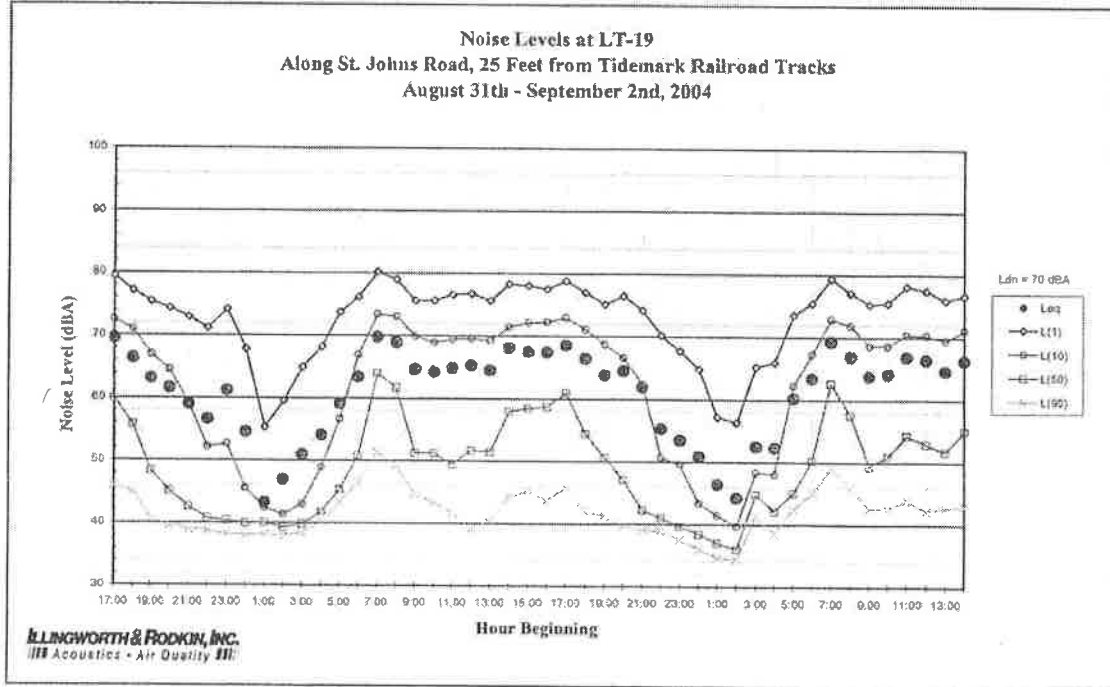


Figure A-21: Daily Trend in Noise Levels at LT-19



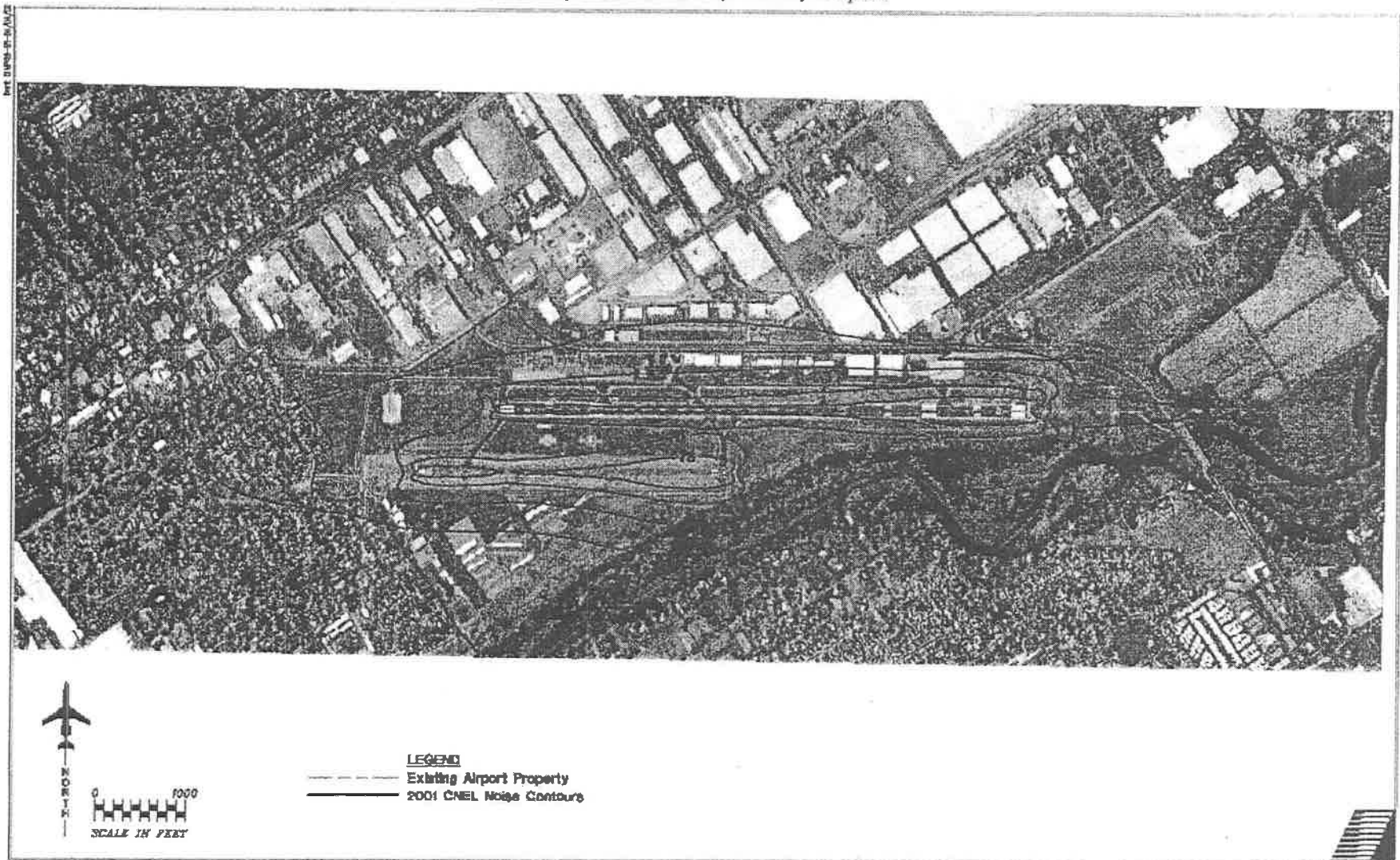
*Table A-3: Noise Contour Distances for Major Railroad Lines in Stanislaus County*

| Railroad Description*                                 | Distance from Centerline of the Railroad Tracks<br>(in feet) |        |        |        |
|---|--|--------|--------|--------|
|   | 75-Ldn   | 70-Ldn | 65-Ldn | 60-Ldn |
| Union Pacific Railroad (UPRR)                         | 70   | 150    | 320    | 680    |
| Burlington Northern and Santa Fe<br>(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.

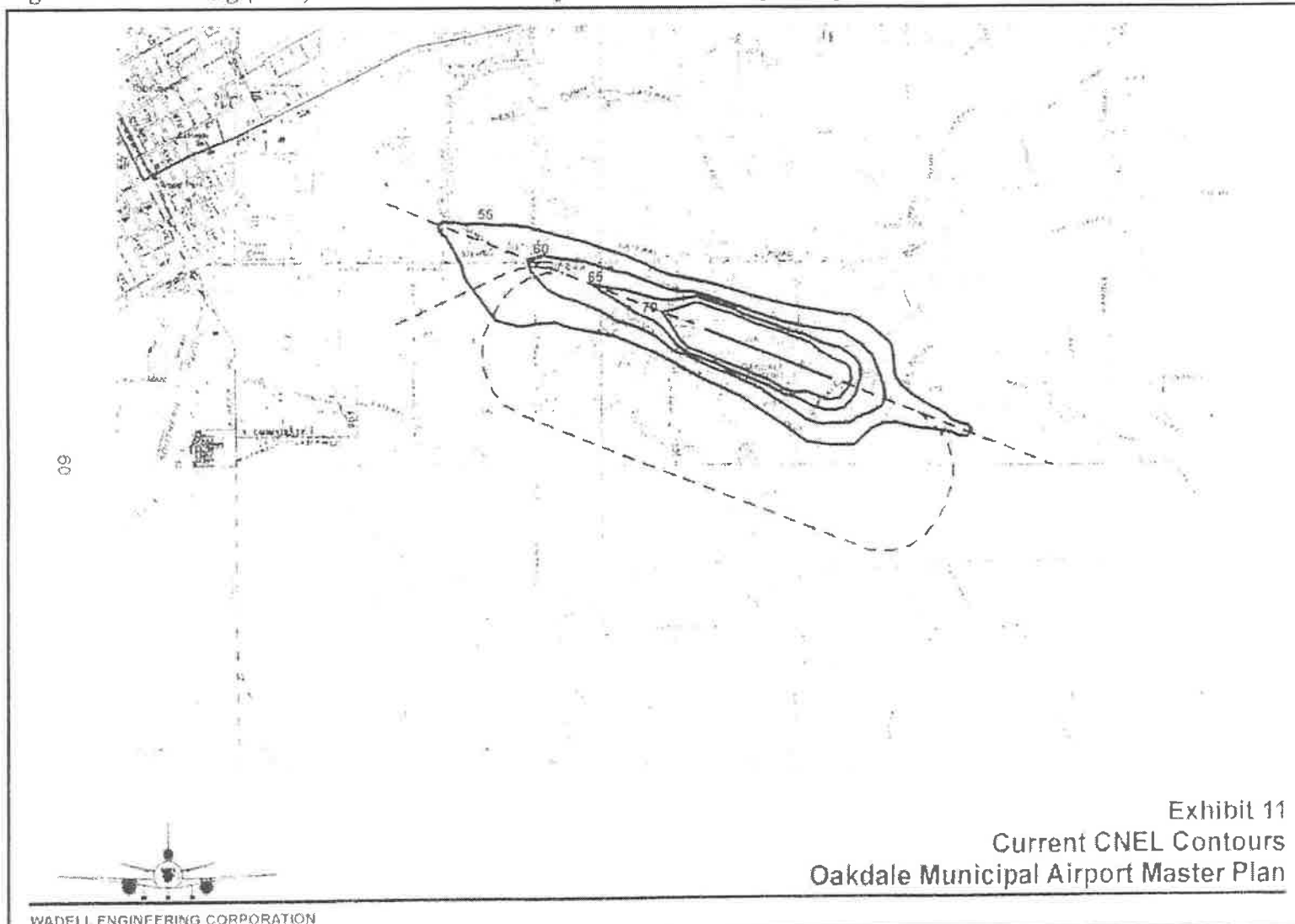
Figure A-22: Existing (2001) CNEL Noise Contours for Modesto City-County Airport



Source: Modesto City-County Airport (Harry Sham Field) 2002 Airport Master Plan, prepared by Coffman Associates.



Figure A-23: Existing (1995) CNEL Noise Contours for Oakdale Municipal Airport



Source: Oakdale Municipal Airport 1996 Airport Master Plan, prepared by Wadell Engineering Corporation

## **Appendix B: Future Noise Environment**

Table B-1: Calculated Vehicular Traffic Noise Levels for Major Community Roadways

| Community       | Roadway Description       | Distance from Centerline of Roadway (in feet)<br>Based on Traffic Noise Modeling* |        |        |                          |        |        | Maximum $L_{eq(1hr)}$ at 75 feet<br>from Centerline |                             |
|-----------------|---------------------------|---|--------|--------|--------------------------|--------|--------|---|-----------------------------|
|                 |                           | Existing  |        |        | 2030 Circulation Element |        |        | Existing  | 2030 Circulation<br>Element |
|                 |                           | 70-Ldn  | 65-Ldn | 60-Ldn | 70-Ldn                   | 65-Ldn | 60-Ldn | dBA   | dBA                         |
| Salida          | SR 99                     | 440   | 950    | 2040   | 640                      | 1370   | 2950   | 77  | 79                          |
| Salida          | SR 219                    | 90  | 190    | 410    | 200                      | 430    | 930    | 71  | 76                          |
| Salida          | Finney Road               | *   | 100    | 230    | *                        | *      | 50     | 67  | 58                          |
| Salida          | Broadway                  | *   | 100    | 210    | 90                       | 200    | 430    | 67  | 71                          |
| Salida          | Salida Boulevard          | *   | 70     | 160    | 60                       | 120    | 270    | 65  | 68                          |
| Salida          | Sisk Road                 | *   | *      | 60     | *                        | *      | 90     | 58  | 61                          |
| Del Rio         | Mc Henry (North of 108)   | 80  | 160    | 350    | 120                      | 260    | 550    | 70  | 73                          |
| Del Rio         | Ladd Road                 | 80  | 160    | 350    | *                        | 80     | 170    | 70  | 65                          |
| Knights Ferry   | SR 108-120                | 60  | 120    | 260    | 100                      | 220    | 470    | 68  | 72                          |
| La Grange       | SR 132                    | 100   | 220    | 470    | 160                      | 350    | 750    | 72  | 75                          |
| La Grange       | La Grange Boulevard       | *   | *      | *      | *                        | *      | 90     | 56  | 61                          |
| East of Oakdale | SR 108-120                | 50  | 120    | 250    | *                        | 100    | 220    | 68  | 67                          |
| Westley         | SR 33                     | 60  | 120    | 260    | 90                       | 200    | 430    | 68  | 71                          |
| Westley         | Grayson / Howard Road     | *   | 60     | 140    | 50                       | 110    | 240    | 64  | 68                          |
| Grayson         | Grayson Road              | *   | 90     | 190    | 60                       | 130    | 280    | 66  | 68                          |
| Grayson         | River Road                | *   | *      | 100    | *                        | 50     | 110    | 62  | 63                          |
| Crows Landing   | SR 33                     | *   | 90     | 190    | 90                       | 190    | 410    | 66  | 71                          |
| Crows Landing   | Fink / Crows Landing Road | *   | 100    | 230    | 90                       | 200    | 420    | 67  | 71                          |
| Keyes           | SR 99                     | 280   | 590    | 1280   | 380                      | 810    | 1740   | 74  | 76                          |
| Keyes           | Faith Home Road           | *   | *      | 60     | *                        | 100    | 220    | 59  | 67                          |
| Keyes           | Keyes Road                | *   | 90     | 190    | 120                      | 260    | 550    | 66  | 73                          |
| Keyes           | Keyes Road                | 120   | 260    | 550    | 190                      | 410    | 870    | 73  | 76                          |
| Empire          | SR 132                    | *   | 100    | 210    | 100                      | 220    | 470    | 67  | 72                          |

| Community            | Roadway Description                  | Distance from Centerline of Roadway (in feet)<br>Based on Traffic Noise Modeling* |        |        |                          |        |        | Maximum $L_{eq}(hr)$ at 75 feet<br>from Centerline |                          |
|----------------------|--------------------------------------|---|--------|--------|--------------------------|--------|--------|--|--------------------------|
|                      |                                      | Existing  |        |        | 2030 Circulation Element |        |        | Existing   | 2030 Circulation Element |
|                      |                                      | 70-Ldn  | 65-Ldn | 60-Ldn | 70-Ldn                   | 65-Ldn | 60-Ldn | dBA  | dBA                      |
| Empire               | Santa Fe Avenue                      | 90  | 190    | 400    | 110                      | 240    | 510    | 71   | 72                       |
| Empire               | Church Street                        | 60  | 120    | 260    | 60                       | 140    | 300    | 68   | 69                       |
| Hickman              | Hickman Road                         | 120   | 260    | 560    | 160                      | 350    | 750    | 73   | 75                       |
| Hickman              | Lake Road                            | *   | 100    | 220    | 70                       | 150    | 320    | 67   | 69                       |
| Denair               | Santa Fe Avenue                      | *   | 90     | 190    | 80                       | 180    | 380    | 66   | 71                       |
| Denair               | Monte Vista Avenue                   | *   | *      | 100    | *                        | 70     | 150    | 62   | 64                       |
| Denair               | Zeering Road                         | *   | 100    | 220    | 90                       | 180    | 400    | 67   | 71                       |
| Denair               | Gratton Road                         | 50  | 120    | 250    | 80                       | 180    | 380    | 68   | 71                       |
| Denair               | Gratton Road                         | *   | 60     | 130    | 50                       | 110    | 230    | 64   | 67                       |
| Rural State Highways | SR 165 (Co. Line to SR 99)           | 60  | 120    | 260    | 80                       | 170    | 370    | 68   | 70                       |
| Rural State Highways | SR 219 (Salida to SR 108)            | 70  | 150    | 320    | 200                      | 430    | 930    | 69   | 76                       |
| Rural State Highways | SR 33 (Co. Line to Co. Line)         | 60  | 140    | 300    | 140                      | 300    | 640    | 69   | 74                       |
| Rural State Highways | I-5 (Co. Line to Co. Line)           | 190   | 410    | 870    | 320                      | 700    | 1510   | 76   | 80                       |
| Rural State Highways | SR 108 (SR 219 to SR 120)            | 60  | 140    | 300    | 80                       | 180    | 390    | 69   | 71                       |
| Rural State Highways | SR 120 (Co. Line to Co. Line)        | 80  | 160    | 350    | 80                       | 160    | 350    | 70   | 70                       |
| Rural State Highways | SR 4 (Co. Line to Co. Line)          | *   | *      | 100    | *                        | 90     | 190    | 62   | 66                       |
| Rural State Highways | SR 132 (West of Modesto)             | 100   | 210    | 450    | 160                      | 350    | 760    | 72   | 75                       |
| Rural State Highways | SR 132 (East of Modesto)             | *   | 100    | 210    | 100                      | 220    | 470    | 67   | 72                       |
| Rural County Roads   | Claribel Road (Mc Henry to Coffee)   | 130   | 280    | 600    | 600                      | 1290   | 2770   | 73   | 82                       |
| Rural County Roads   | Claribel Road (Oakdale to Albers)    | 150   | 320    | 700    | 510                      | 1100   | 2380   | 74   | 81                       |
| Rural County Roads   | Hatch Road (Carpender to Modesto)    | *   | 100    | 220    | 80                       | 160    | 350    | 67   | 70                       |
| Rural County Roads   | Hatch Road (Modesto CL to Mitchell)  | 80  | 180    | 390    | 140                      | 310    | 660    | 71   | 74                       |
| Rural County Roads   | Hatch Road (Mitchell to Santa Fe)    | 90  | 190    | 400    | 120                      | 260    | 550    | 71   | 73                       |
| Rural County Roads   | Gray son Road (I-5 to Crows Landing) | *   | 90     | 190    | 60                       | 130    | 280    | 66   | 68                       |

| Community          | Roadway Description                           | Distance from Centerline of Roadway (in feet)<br>Based on Traffic Noise Modeling* |        |        |                          |        |        | Maximum $L_{eq}(hr)$ at 75 feet<br>from Centerline |                             |
|--------------------|---|---|--------|--------|--------------------------|--------|--------|--|-----------------------------|
|                    |   | Existing  |        |        | 2030 Circulation Element |        |        | Existing   | 2030 Circulation<br>Element |
|                    |   | 70-Ldn  | 65-Ldn | 60-Ldn | 70-Ldn                   | 65-Ldn | 60-Ldn | dBA  | dBA                         |
| Rural County Roads | Keyes Road (Carpender to Hickman)             | *   | 70     | 160    | 90                       | 190    | 420    | 65   | 71                          |
| Rural County Roads | West Main (Turlock to I-5)                    | 100   | 220    | 470    | 180                      | 400    | 850    | 72   | 76                          |
| Rural County Roads | Carpenter Road (West Main to Grayson)         | 60  | 120    | 260    | 110                      | 230    | 500    | 68   | 72                          |
| Rural County Roads | Carpenter Road (Grayson to Modesto)           | 50  | 120    | 250    | 110                      | 230    | 500    | 68   | 72                          |
| Rural County Roads | Crows Landing Road (Crows Landing to Modesto) | 60  | 140    | 300    | 110                      | 240    | 520    | 69   | 73                          |
| Rural County Roads | Mc Henry Avenue (Ladd Road to Co. Line)       | 80  | 160    | 350    | 120                      | 260    | 550    | 70   | 73                          |
| Rural County Roads | Claus Road (SR132 to Claribel)                | *   | 100    | 220    | 120                      | 260    | 550    | 67   | 73                          |
| Rural County Roads | Claus Road (Claribel to Patterson)            | 80  | 180    | 380    | 180                      | 400    | 850    | 71   | 76                          |
| Rural County Roads | Coffee Road (Modesto to Patterson)            | *   | 60     | 140    | *                        | 60     | 120    | 64   | 63                          |
| Rural County Roads | Oakdale Road (Patterson to Claribel)          | 60  | 120    | 260    | 90                       | 190    | 410    | 68   | 71                          |
| Rural County Roads | Oakdale Road (Claribel to Modesto)            | 60  | 120    | 260    | 100                      | 220    | 470    | 68   | 72                          |
| Rural County Roads | Tully Road (Ladd to Bangs)                    | *   | 60     | 130    | 90                       | 190    | 410    | 64   | 71                          |
| Rural County Roads | Mitchell Road (Hatch to Modesto CL)           | 100   | 220    | 460    | 120                      | 260    | 560    | 72   | 73                          |
| Rural County Roads | Santa Fe Avenue (Empire to Co. Line)          | 60  | 140    | 300    | 100                      | 210    | 450    | 69   | 72                          |
| Rural County Roads | Geer Road (Turlock to SR 132)                 | 90  | 190    | 400    | 140                      | 290    | 630    | 71   | 74                          |
| Rural County Roads | Albers Road (SR 132 to Oakdale)               | 120   | 260    | 550    | 230                      | 490    | 1050   | 73   | 77                          |
| Rural County Roads | Hickman Road (West Main to Waterford)         | *   | 60     | 120    | *                        | 90     | 200    | 63   | 66                          |

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

Figure B-1: Noise Contour Map for Major Roadway Noise Sources (Unconstrained 2030)

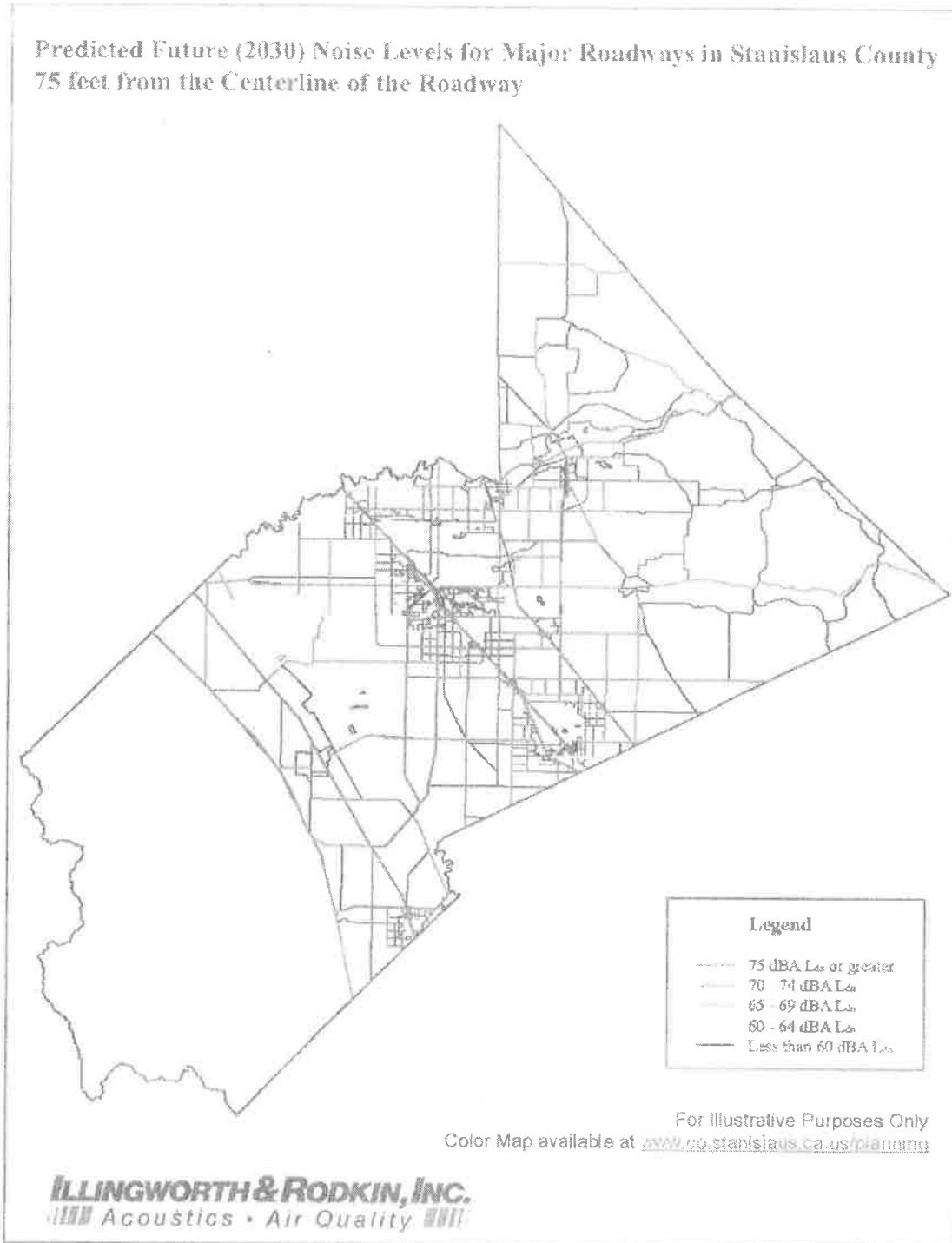
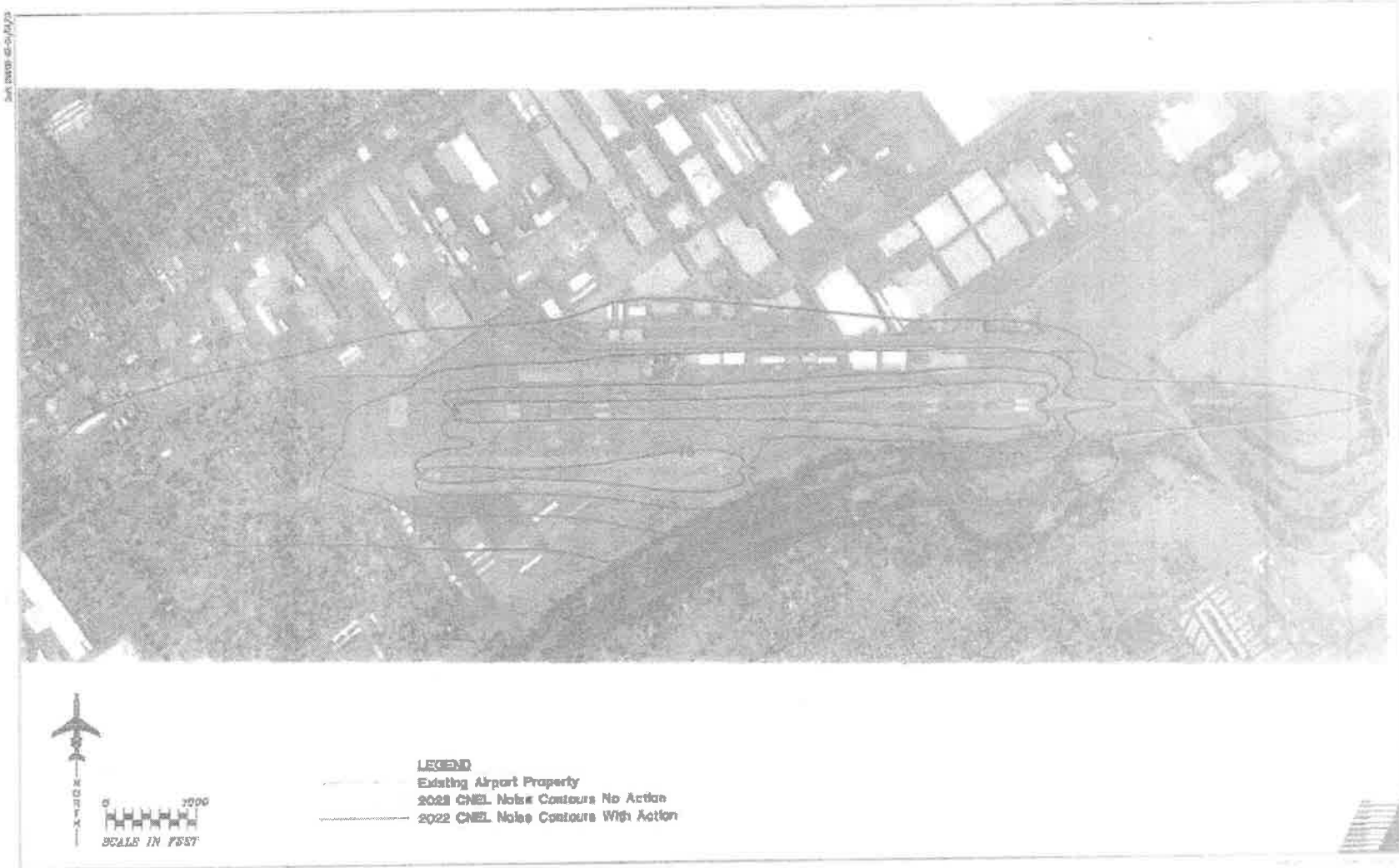


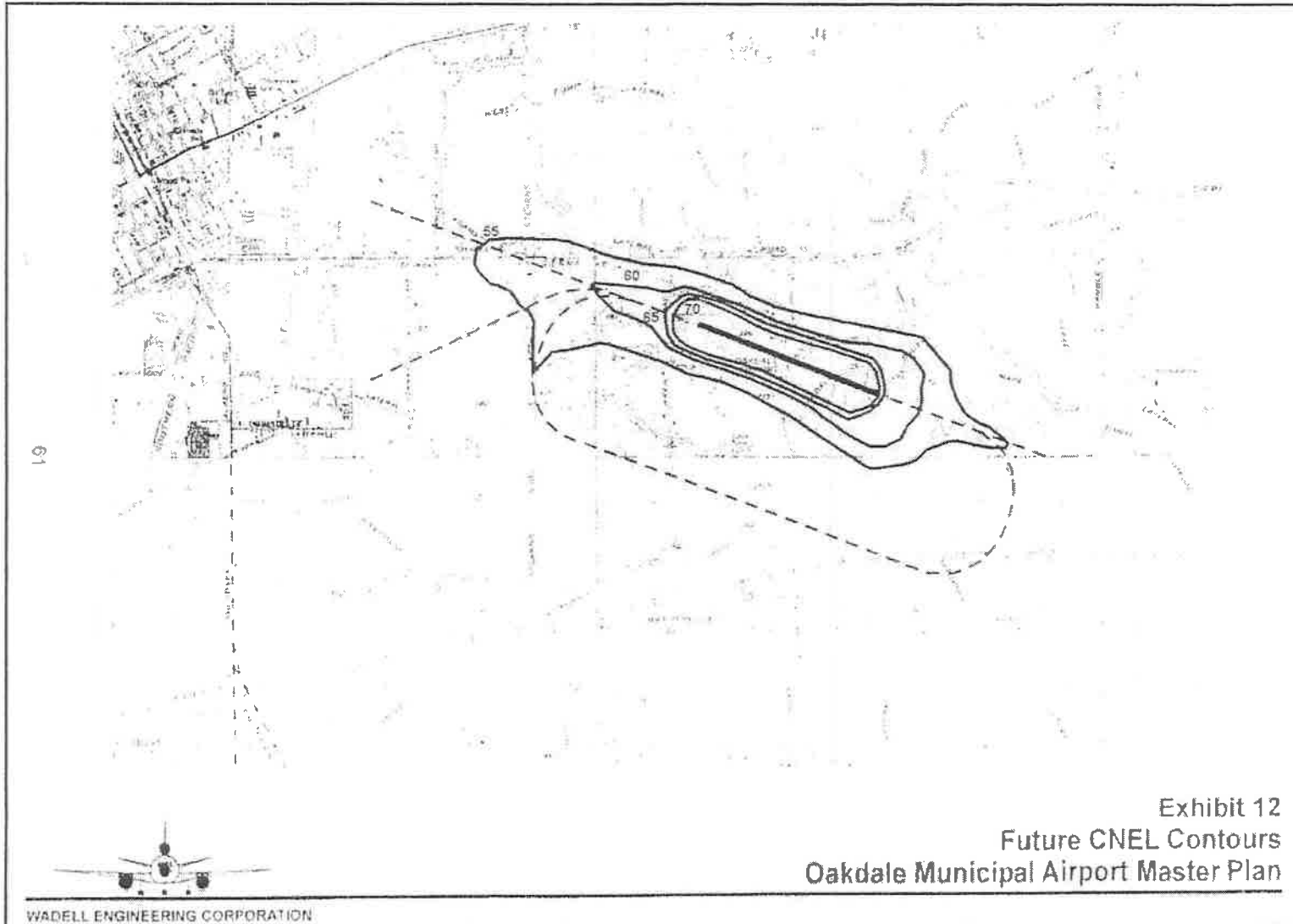
Figure B-2: Long Term (2022) CNEL Noise Contours for Modesto City-County Airport



Source: Modesto City-County Airport (Harry Sham Field) 2002 Airport Master Plan, prepared by Coffman Associates.



Figure B-4: Future (2015) CNEL Noise Contours for Oakdale Municipal Airport



Source: Oakdale Municipal Airport 1996 Airport Master Plan, prepared by Wadell Engineering Corporation

Chapter **Five 5**

**SAFETY ELEMENT**

**INTRODUCTION**

**Section 65302 of the California Government Code requires that every jurisdiction in California adopt a Safety Element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides, subsidence; liquefaction; and other geologic hazards known to the legislative body; flooding; military installations; and wildland and urban fires.**

Stanislaus County is susceptible to ~~nearly every type many~~ of **the** safety hazards ~~in existence listed above~~ with the exception of tidal waves, **military installations**, and major hazardous waste disposal sites. **No special airspace or aircraft training routes are located in Stanislaus County.** Information on the various types of safety hazards ~~are is provided in Chapter 5 of the "Stanislaus County General Plan -- Support Documentation"~~ and summarized herein.

## **SAFETY HAZARDS**

### **Seismic and Geological Hazard**

Several known faults exist within Stanislaus County. They are located in the **western extreme eastern** part of the County and in the Diablo Range west of I-5. These faults could cause ground shaking of an intensity approaching "X" (ten) on the Modified Mercalli Scale, which would result in very serious damage to most structures. The existence of unreinforced masonry buildings could cause severe loss of life and economic dislocation in an earthquake. **However, with exception of the Diablo Grande community, most development in the unincorporated county is not located near the areas of greatest shaking potential.**

The area west of I-5 (Diablo Range) is noted for unstable geologic formations that are susceptible to landslide. A portion of the southern part of this area includes the Ortigalita Fault, part of which is designated as an Alquist-Priolo Earthquake Fault Zone. This prohibits most construction without a geologic study.

**(See Figures V-1 – Fault Map and V-2 – Earthquake Hazard Map)**

### **Dam Inundation**

One of the hazards associated with **major** seismic activity that has a **major** potential for destruction and loss of life is dam failure. **Entire cities Large portions of the county** could be under 10 feet of water or more within a few hours of failure.

**Seven dams present an inundation risk for Stanislaus County, including: Don Pedro, Exchequer, La Grange, New Melones, Pine Flat, San Luis, and Tulloch Reservoirs. The risks of inundation resulting from failure of a dam pose a threat to the entire valley floor and, in particular, from New Melones and Don Pedro dams within the area of greatest population density.**

**(See Figure V-3– Dam Inundation Map)**

### **Flood Hazards**

The ~~major flooding~~ **main flood risk** in Stanislaus County ~~occurs~~ **exists** along the San Joaquin River and isolated stretches of **Dry Creek and** the Tuolumne River. Creeks such as Salado, Sand, and Orestimba also experience flooding. ~~Portions of the Stanislaus River still flood to the extent that there can be crop damage, but the Corps of Engineers has purchased flowage easements so that they have the "right" to flood this area.~~ **Nine Reclamation Districts maintain levees along the San Joaquin River, built by the Corps of Engineers. Since these levees do not extend the full length of the river, flooding still occurs. There are two flood control districts in the County, the Orestimba Flood Control District and Sand Creek Flood Control District (Denair).**

**(See Figures V-4 – Flood Hazard Map, and V-5 – 100-Year and 200-Year Flood Zone, Best Available Maps)**

## **Fire Hazards**

Urban fires are generally man-caused fires that can be mitigated through proper building code requirements, fire flow minimums and zoning or subdivision ordinance requirements.

Wildland fires are generally limited to the foothills on either side of the County. Although there is less of a hazard to structures and people, controlling such fires is more difficult because of their inaccessibility. **Four factors contribute to wildland fires: vegetation, climate, topography, and people. Chaparral, grasslands and other wild plant life provide the major sources of fire fuel. Within Stanislaus County, the areas of potential wildland fires are designated as State Responsibility Areas (SRA), and are located along the Diablo Range, generally west of Interstate 5, and the Sierra Nevada foothills in the eastern portions of the County. SRAs are under the responsibility of the California Department of Forestry and Fire Protection (CDF, or CAL FIRE). Government Code Section 51178 requires the Department of Forestry and Fire Protection to identify very high fire hazard severity zones in the state. These areas of the county are sparsely populated. Evacuation routes are available along existing roads.**

**(See Figures V-6 – Fire Hazard Severity Zones, and V-7 – State Responsibility Areas)**

## **Hazardous Materials**

The use, transportation and disposal of hazardous materials is **becoming** an issue of increasing concern. State laws were passed in 1985 that require users of hazardous materials to disclose the type and location of such materials so that emergency response teams can be prepared for potential disasters. ~~Routes are being specified to limit transportation of hazardous material such as nuclear waste.~~

**Cal EPA can delegate responsibility for hazardous materials oversight, permitting, and regulation to local agencies through the Certified Unified Program Agency (CUPA) program. The local CUPA is responsible for writing and updating a Hazardous Materials Area Plan (for the public safety response in the jurisdiction) and providing guidelines for the Hazardous Materials Business Plan (for local businesses designated as handlers of hazardous materials). The Stanislaus County Hazardous Material Division of the Department of Environmental Resources is the CUPA.**

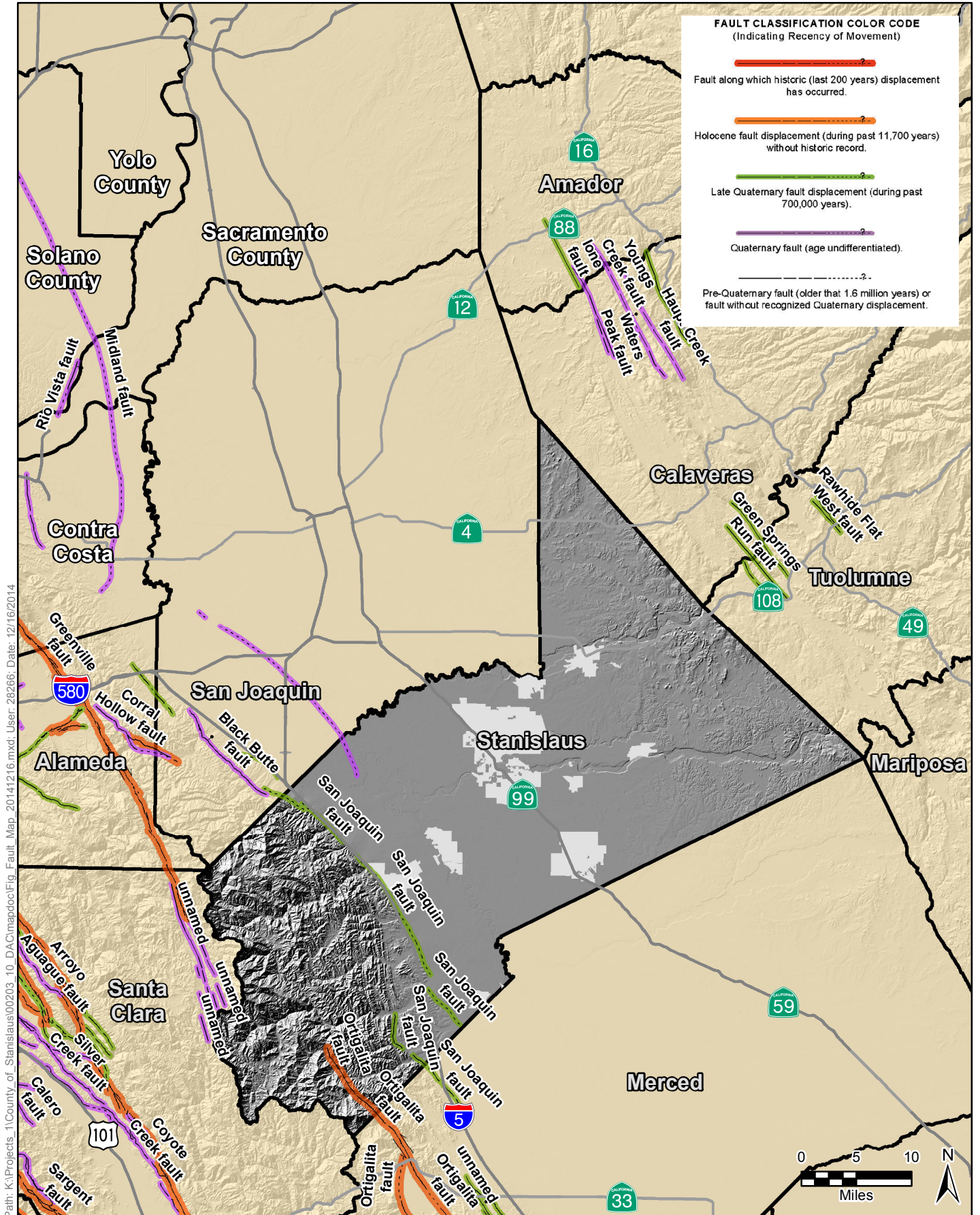
## **Airports**

**Airports located in urban areas, or areas with dwellings in the approach or take-off pattern may cause safety problems for both the airplanes and occupants on the ground. Stanislaus County has an Airport Land Use Commission (ALUC) which reviews land use proposals within the approach patterns of airports (not air strips). The Commission bases its determinations on whether or not the proposed development meets compatibility criteria identified in the adopted ALUC plan. Location of air strips is governed by the County Zoning Ordinance and, in some cases, the State. The County has an adopted policy regarding the siting of air strips that requires approach patterns to be free from development (See Appendix V-A – Airport Siting Standards). County regulations require new communications antennas in agricultural areas be referred to crop dusters for input regarding safety.**

### **Other Safety Hazards**

~~Airports located in urban areas, or areas with dwellings in the approach or take-off pattern may cause safety problems for both the airplanes and occupants on the ground.~~ **Other safety concerns include unprotected canals, and insufficient lighting and large antennas, communication facilities, and wind power facilities located** in the agricultural areas. ~~may be hazardous to crop dusters if not properly located.~~ Streets and roads in terms of width, location and level of maintenance are important to safe travel of the public and for emergency vehicle (sheriff, fire, ambulance) access. ~~Unprotected canals in urban areas and lack of, or insufficient, street lighting are safety problems.~~ **Road safety is discussed in more detail in the Circulation Element of the Stanislaus County General Plan.** Dust and dirt moved as a result of erosion can also cause safety problems, as can the uncovered transportation of sand and gravel material.





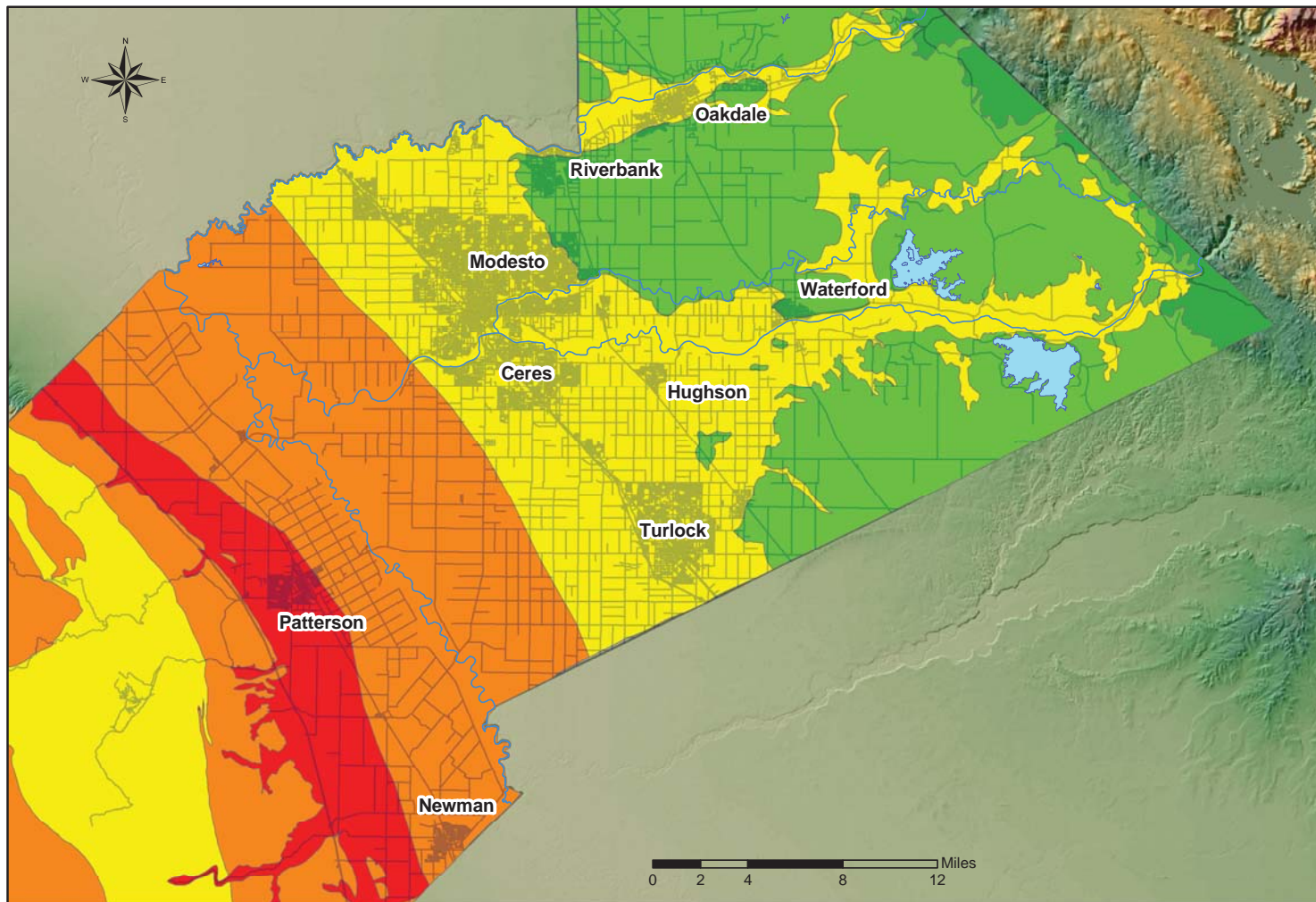
Path: K:\Projects\_1\County of Stanislaus\00203\_10\_DAO\mapdoc\Fig. Fault\_Map\_20141216.mxd; User: 28266; Date: 12/16/2014

**FIGURE V-1**  
**Stanislaus County Fault Map**





**FIGURE V-2 - 2010 Stanislaus County -- Earthquake Hazard**



**Map Legend:**

- Rivers
- Lakes
- Roads

**Shaking Potential**  
**Peak Ground Acceleration**

- 0.45 G's
- 0.35 G's
- 0.25 G's
- 0.15 G's
- 0.05 G's

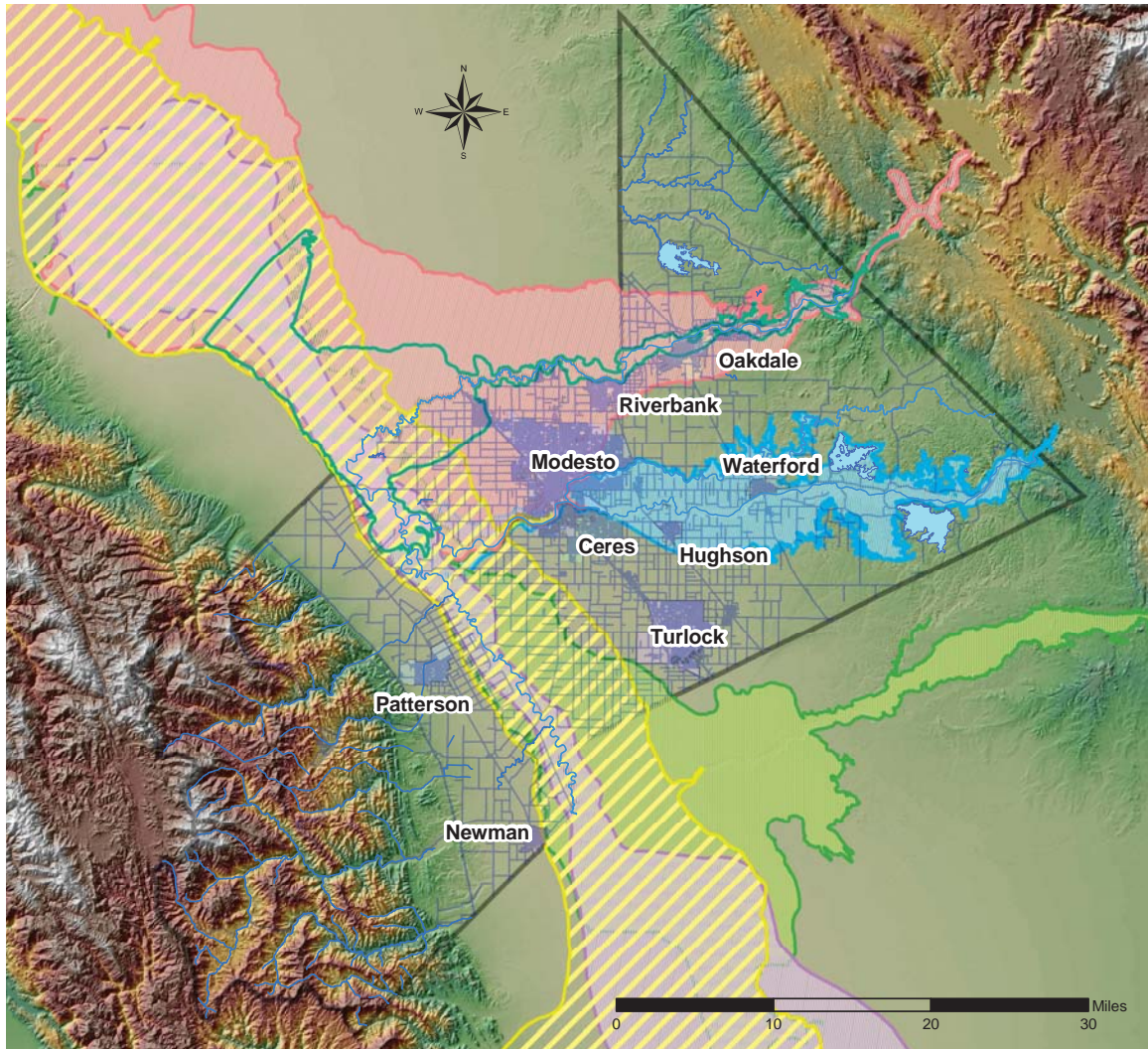
↑ Intensity

Map displays Stanislaus County with Earthquake Shaking Zones at PGA. (Peak Ground Acceleration)

Prepared by:  
 Stanislaus County  
 Public Works - GIS  
 November, 2009



**FIGURE V-3 - Stanislaus County Dam Inundation Hazards (2010)**



**Map Legend:**

- Lakes
- Rivers
- Streams
- Roads

**Dam Inundation Areas**

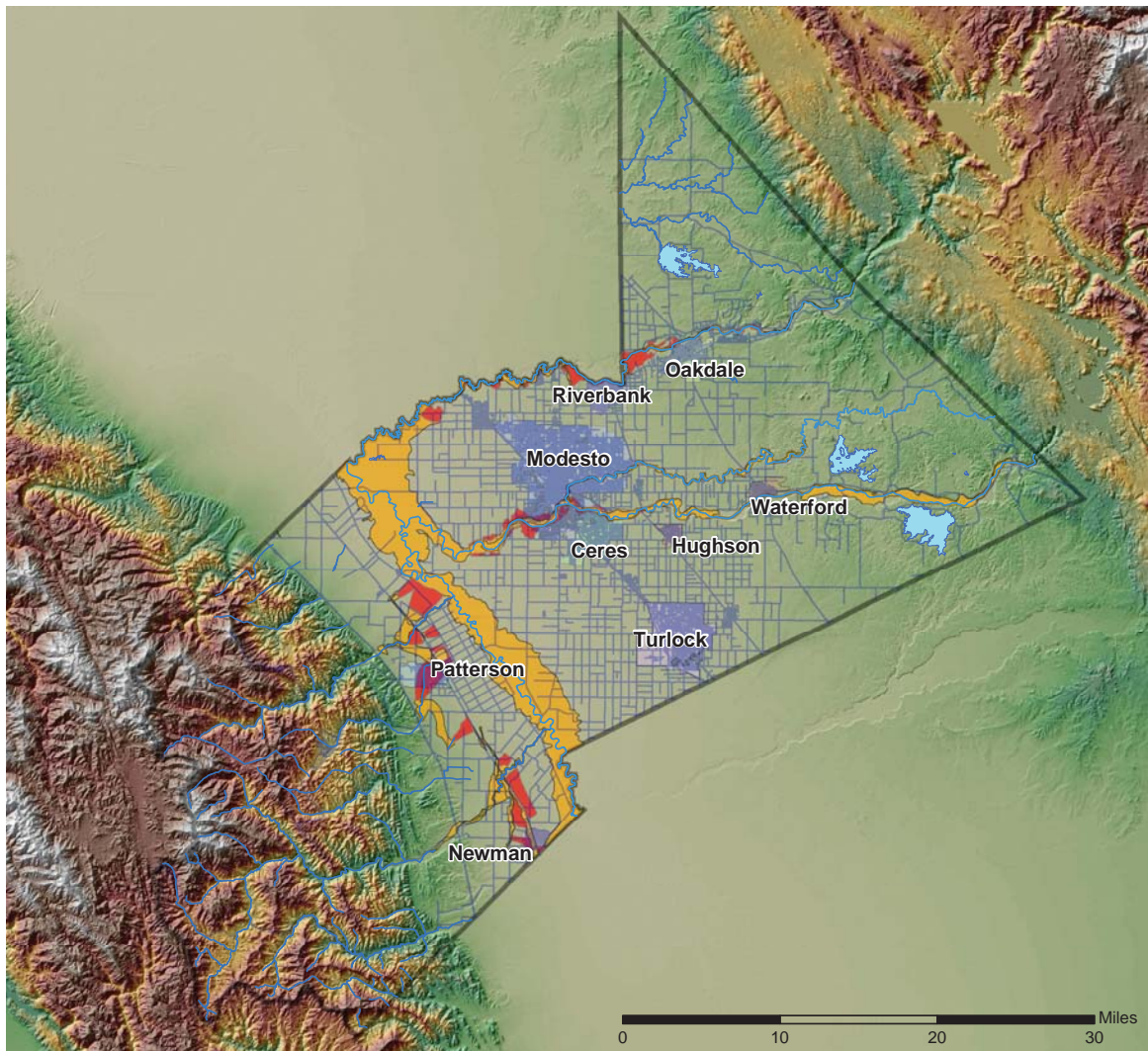
**Dam Name**

- Don Pedro
- Exchequer
- New Melones
- San Luis
- Pine Flat
- Tulloch

Map displays Stanislaus County with Dam Inundation Areas of regional dams.

Prepared by:  
Stanislaus County  
Public Works - GIS  
November, 2009

**FIGURE V-4 - Stanislaus County Flood Hazards (2010)**



**Map Legend:**

- Rivers
- Streams
- Lakes
- Roads

**FEMA Flood Zones**

Federal Emergency Mgt Agency

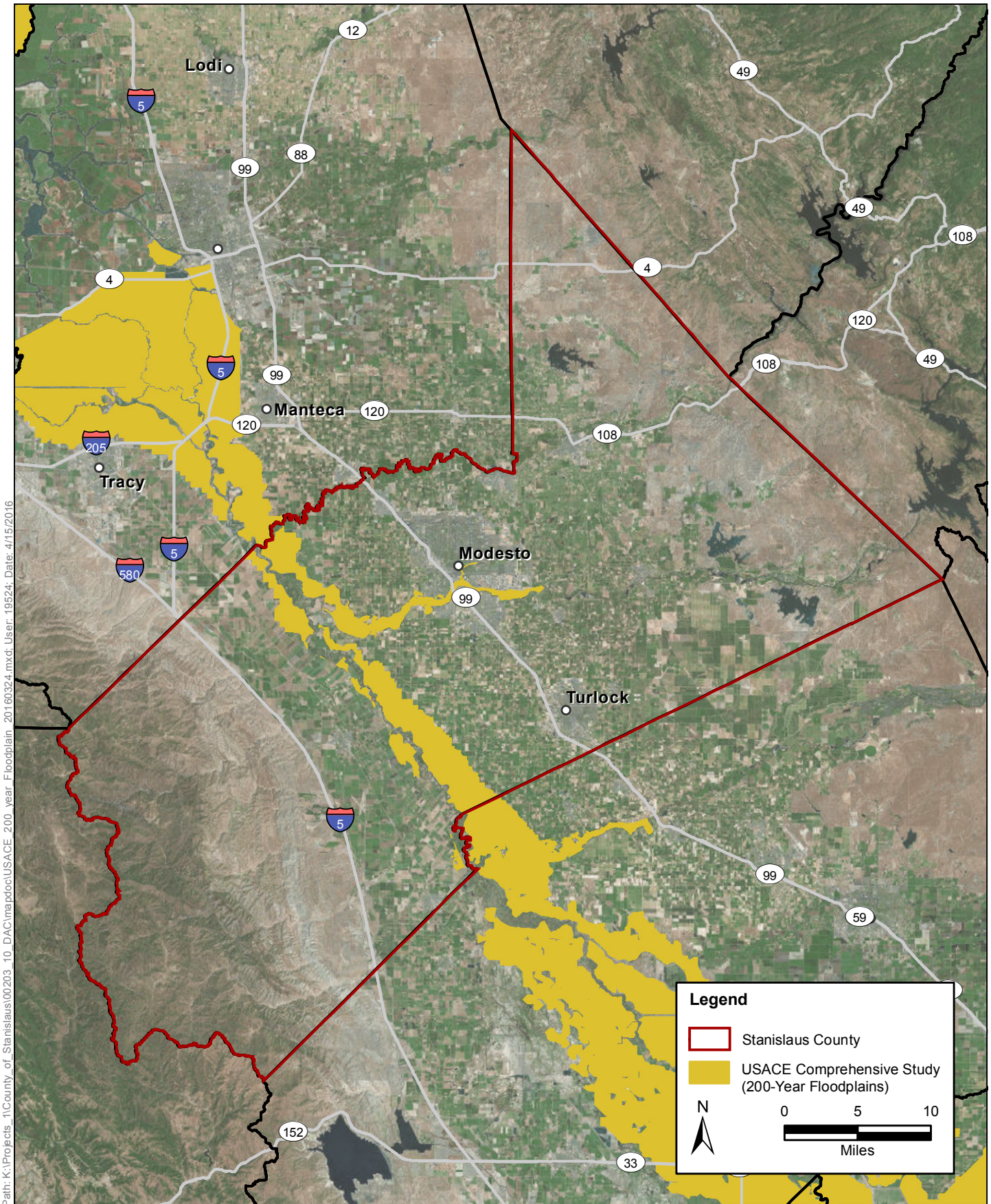
- 100 Year Flood Zone
- 500 Year Flood Zone



Map displays Stanislaus County with 100 and 500 year FEMA floodplain boundaries. ( 1% and 0.2% chance of flood )

Prepared by:  
Stanislaus County  
Public Works - GIS  
November, 2009





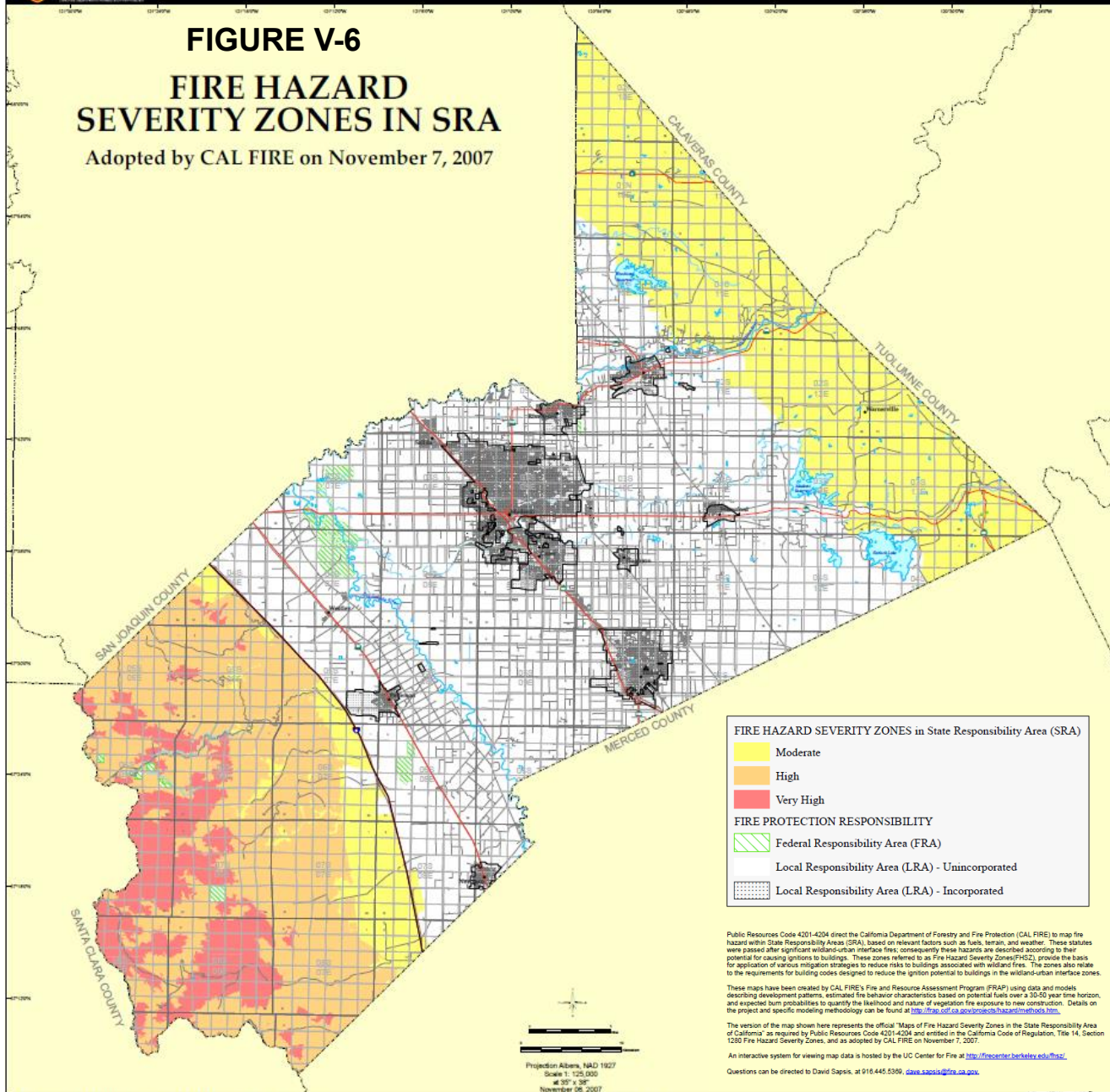
**FIGURE V-5**  
**Stanislaus County 200-year Floodplain**





## FIGURE V-6 FIRE HAZARD SEVERITY ZONES IN SRA

Adopted by CAL FIRE on November 7, 2007



**FIRE HAZARD SEVERITY ZONES in State Responsibility Area (SRA)**

- Moderate
- High
- Very High

**FIRE PROTECTION RESPONSIBILITY**

- Federal Responsibility Area (FRA)
- Local Responsibility Area (LRA) - Unincorporated
- Local Responsibility Area (LRA) - Incorporated

Public Resources Code 4201-4204 direct the California Department of Forestry and Fire Protection (CAL FIRE) to map fire hazard within State Responsibility Areas (SRA), based on relevant factors such as fuels, terrain, and weather. These statutes were passed after significant wildland-urban interface fires; consequently these hazards are described according to their potential for causing ignitions to buildings. These zones referred to as Fire Hazard Severity Zones (FHSZ), provide the basis for application of various mitigation strategies to reduce risks to buildings associated with wildland fires. The zones also relate to the requirements for building codes designed to reduce the ignition potential to buildings in the wildland-urban interface zones.

These maps have been created by CAL FIRE's Fire and Resource Assessment Program (FRAP) using data and models describing development patterns, estimated fire behavior characteristics based on potential fuels over a 30-50 year time horizon, and expected burn probabilities to quantify the likelihood and nature of vegetation fire exposure to new construction. Details on the project and specific modeling methodology can be found at <http://frap.cdf.ca.gov/projects/hazard/frapmtds.html>.

The version of the map shown here represents the official "Maps of Fire Hazard Severity Zones in the State Responsibility Area of California," as required by Public Resources Code 4201-4204 and entitled in the California Code of Regulation, Title 14, Section 1280 Fire Hazard Severity Zones, and as adopted by CAL FIRE on November 7, 2007.

An interactive system for viewing map data is hosted by the UC Center for Fire at <http://firecenter.berkeley.edu/fras/>.

Questions can be directed to David Sapsis, at 916.445.5390, [dave.sapsis@fire.ca.gov](mailto:dave.sapsis@fire.ca.gov).

The State of California and the Department of Forestry and Fire Protection make no representations or warranties regarding the accuracy of data or maps. Neither the State nor the Department shall be liable under any circumstances for any direct, special, incidental, or consequential damages with respect to any claim by any user or third party on account of, or arising from, the use of data or maps.

Obtain FRAP maps, data, metadata and publications on the internet at <http://frap.cdf.ca.gov>  
 For more information, contact CAL FIRE-FRAP, PO Box 844248, Sacramento, CA 95824-2480, (916) 327-3639.

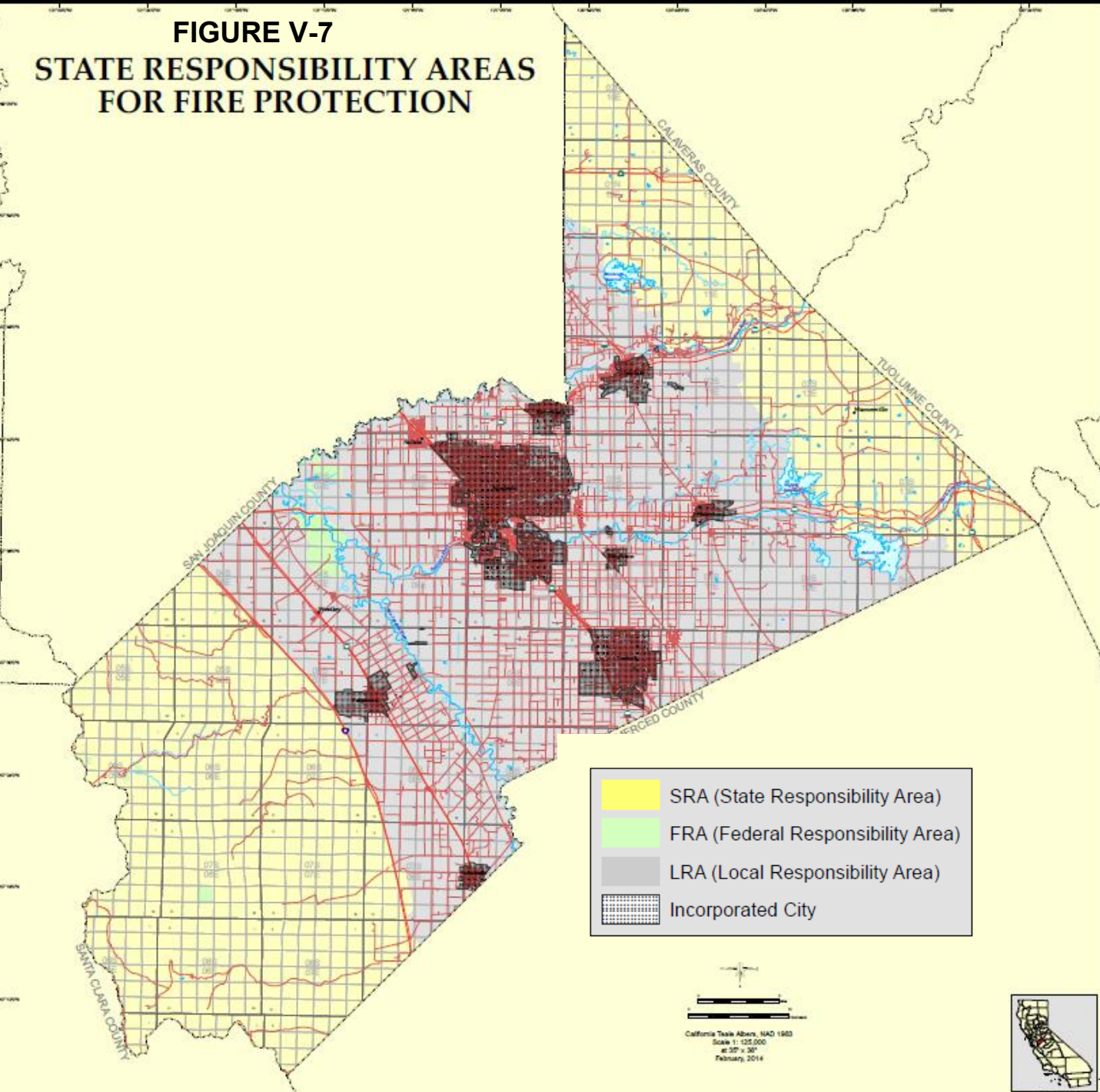
Arnold Schwarzenegger, Governor,  
 State of California,  
 Mike Christian, Secretary for Resources,  
 The Resources Agency,  
 Ruben Gallegos, Director,  
 Department of Forestry and Fire Protection

MAP ID: 194031.MAP  
 DATA SOURCES:  
 CAL FIRE Fire Hazard Severity Zones (FHSZ0905\_0)  
 CAL FIRE State Responsibility Areas (SRA05\_0)  
 CAL FIRE Incorporated Cities (Inc0007\_0)  
 PLUS8 (1:100,000 USGS, Land Oracle with CAL FIRE grid)



# STANISLAUS COUNTY

## FIGURE V-7 STATE RESPONSIBILITY AREAS FOR FIRE PROTECTION



|  |                                   |
|--|-----------------------------------|
|  | SRA (State Responsibility Area)   |
|  | FRA (Federal Responsibility Area) |
|  | LRA (Local Responsibility Area)   |
|  | Incorporated City                 |

California State Abers, NAD 1983  
Scale 1" = 125,000'  
at 30" x 30"  
February 2014



The State of California and the Department of Forestry and Fire Protection make no representation or warranties regarding the accuracy of data or maps. Neither the State nor the Department shall be held liable under any circumstances for any direct, special, incidental, or consequential damages with respect to any claim by any user or third party on account of, or arising from, the use of data or maps.

Obtain FRAP maps, data, materials and publications on the Internet at <http://www.frp.ca.gov>  
For more information, contact CAL FIRE/FRAP, PO Box 944048, Sacramento, CA 95824-3600, (916) 527-3838.

Edmond G. Brown Jr., Governor, State of California  
John Leland, Secretary for Resources, The National Resources Agency  
Ken Plonka, Director, Department of Forestry and Fire Protection

MAP © 2014  
DATA SOURCES  
CAL FIRE State Responsibility Areas (SRA13\_2)  
CAL FIRE Incorporated Cities (Group13\_2)

## **MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN**

~~The Stanislaus County Board of Supervisors has adopted, and will routinely update, the Stanislaus County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) State Office of Emergency Services approved the County's Multi-Jurisdictional Hazard Mitigation Plan on April 29, 2005 and the Adopted plans are submitted to the Federal Emergency Management Agency (FEMA) on July 22, 2005. The Board of Supervisors adopted the Plan on December 13, 2005.~~

~~The County and 48 other jurisdictions participated in the Multi-Jurisdictional Hazard Mitigation Plan. Each of these 48 participating jurisdictions had their governing body formally adopt the County of Stanislaus Multi-Jurisdictional Hazard Mitigation Plan, along with their individual plan, as their own Local Hazard Mitigation Plan. The County's plan serves as the umbrella plan with each individual jurisdiction's plan considered an annex. The Stanislaus County Multi-Jurisdictional Hazard Mitigation Plan is incorporated into the Safety Element of the General Plan and shall be implemented as appropriate.~~

~~Detailed information on the various types of safety hazards and mitigation strategies to help reduce risk and prevent future losses in Stanislaus County are provided in the MJHMP. Dam Inundation and Flood Hazard maps from the 2010 MJHMP have been incorporated into the Safety Element for reference. However, the MJHMP is required to be updated every five years and, as such, more recent maps and data may be found in subsequent MJHMPs. The county is relying upon the MJHMP to meet its requirements under California Government Code Section 65302(g)(4).~~

~~The hazards in the County's adopted MJHMP were identified through a process that utilized input from the various multi-jurisdictional partners, Work Groups, Stanislaus County Emergency Operations Plan, the Safety Element of the General Plan, input from the County's Planning Director, Public Health Director, Assistant Director of Emergency Services, City governments, researching past disaster declarations in the County, and public input. Hazards that are unlikely to occur, or for which the risk of damage is accepted as being very low, were eliminated from consideration. The MJHMP focuses on the five hazards with the greatest potential to cause a negative impact on the community. They are: earthquake, landslide, dam failure, flood, and wildfire.~~

~~The MJHMP accomplishes the following:~~

- ~~• Ensures compliance with the Disaster Mitigation Act of 2000, that establishes requirements for local governments and requires that in order to remain eligible to receive Federal funding for both pre-disaster and post-disaster mitigation project funding, a local government must have a FEMA approved Local Hazard Mitigation Plan written in accordance with Section 322 of the Act; and~~
- ~~• Ensures that Stanislaus County complies with the Disaster Mitigation Act requirement that only local governments with a State and FEMA approved Local Hazard Mitigation Plan will be eligible to receive Hazard Mitigation Grant Program project grants for disasters declared after November 1, 2004; and~~



- Ensures compliance with the requirement that only local governments with a State and FEMA approved Local Hazard Mitigation Plan will be eligible to receive future mitigation project funding awarded through the Flood Mitigation Administration Assistance program, the Pre-Disaster Mitigation grant programs, and the U.S. Small Business Administration's (SBA) low-interest, pre-disaster, small business loan program; and
- Unlike past years, when a local plan was created after the disaster damage, the County must now have an approved local plan in place before a disaster strikes.

The MJHMP includes the following components:

1. Prerequisites – includes the adoption of the final plan by the local governing body. This demonstrates the County's commitment to fulfilling the mitigation goals and objectives outlined in the plan.
2. Planning Process – documents the planning process used to develop the plan, including how it was prepared and who was involved in the process.
3. Risk Assessment – includes seven requirements for each of the five hazards identified in the MJHMP
  - A. Identifying Hazards – includes a description of the hazards.
  - B. Profiling Hazard Events – identifies the location, extent, previous occurrences and probability of future events.
  - C. Assessing Vulnerability/Overview – identifies an overall summary description of the vulnerability to each hazard and the impact of each hazard on the jurisdiction.
  - D. Assessing Vulnerability/Identifying Structures – includes the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas.
  - E. Assessing Vulnerability/Estimating Potential Losses – includes estimates of potential dollar losses to vulnerable structures and describes the methodology used to prepare the estimate.
    - Assessing Vulnerability: Addressing Repetitive Loss Properties - As of October 1, 2008, all mitigation plans must also address National Flood Insurance Program (NFIP) insured structures that have been repetitively damaged by floods. Repetitive Loss Properties (RLP) are those for which two or more loses of at least \$1,000 each have been paid under the NFIP within any 10 year period since 1978.
  - F. Assessing Vulnerability/Analyzing Development Trends – includes the land uses and development trends.
  - G. Multi-Jurisdictional Risk Assessment – each of the participating jurisdictions must include their unique risks, if different from the County's, in their individual plan.



4. **Mitigation Strategy – provides the County’s blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources and expands on and improves these existing tools. This entails the development of goals from which specific mitigation actions will be derived. All mitigation actions must be prioritized and the plan must describe the strategy for implementation.**
5. **Plan Maintenance – describes the method and schedule for monitoring, evaluating and updating the plan every five years to make sure the plan remains an active and relevant document.**

## CLIMATE ADAPTATION

The State of California's Cal-Adapt website provides information on key environmental changes that are expected to be the results of climate change. These include: temperature, snowpack, sea level rise, wildfire risk, and precipitation. Cal-Adapt estimates, as of 2016, that the average temperature in Stanislaus County will increase from 60.7 degrees F to 67.2 degrees under a high greenhouse gas emissions scenario or to 64.6 degrees under a low greenhouse gas emissions scenario. Stanislaus County is not subject to snowfall, so changes in snowpack would not directly impact the county. Sea level rise will not affect Stanislaus County, as it is an inland county. Wildfire risk is not predicted to change, nor is the level of precipitation (although precipitation is expected to include more rain and less snow at higher elevations).

The County can be expected to experience the following effects as a result of climate change, most of which are related to the increase in average temperature:

- Increased health risks for vulnerable populations during extended heat waves
- Changes in insect vector populations due to warmer temperatures, and associated increase in human health risk
- Increased drought potential due to less reliable snowfall
- Increased flood risk due to the expected increase in winter rains in relation to winter snow at higher elevations
- Reduced carry-over storage in multi-purpose reservoirs as a result of the need to maintain a larger flood control capacity later into the year
- Extended wildfire season

These effects have the potential to affect the following community resources:

- Essential facilities (hospitals, fire stations, police stations, water and wastewater treatment plants, etc.), transportation systems, utilities, and developed areas, where there is a risk of flooding
- Vulnerable populations, including disadvantaged unincorporated communities, where there is a risk of flooding and where air conditioning is limited
- Industrial or commercial businesses, where flood damage could result in economic losses or the release hazardous materials

The Safety Element policies and implementation measures relating to efforts to improve flood control and reduce risks for future development, and efforts to improve the standard of living in disadvantaged unincorporated communities, along with the MJHMP, comprise the county's adaptation strategy. The risk assessments of flood and wildfire hazard in the MJHMP, and the associated goals and mitigation actions, describe these risks to life, property, and essential facilities in more detail and contain additional adaptation strategies to be undertaken by the County and other jurisdictions within the county.

## GOALS, POLICIES AND IMPLEMENTATION MEASURES

### GOAL ONE

Prevent loss of life and reduce property damage as a result of natural disasters.

~~(Comment: Stanislaus County is prone to a variety of natural disasters. With several rivers traversing the County, flooding is a concern. Although there are no major faults in the valley portion of Stanislaus County, some faults do exist in the foothills on the eastern and western edges of the County. Earthquakes could occur that would cause severe damage in portions of the County.)~~

### POLICY ONE

The County will adopt (and implement as necessary) plans inclusive of the Multi-Jurisdictional Hazard Mitigation Plan, to minimize the impacts of a natural and man-made disasters.

### IMPLEMENTATION MEASURES

1. The County ~~Office of Emergency Services~~ **Sheriff's Department** will continue to work with other jurisdictions to develop evacuation routes to be used in case of a disaster, including dam failure. Evacuation routes will serve all of the jurisdictions in the County; therefore, plans for evacuation routes must be coordinated with these cities.  
**Responsible Departments: Sheriff, Office of Emergency Services / Fire Warden Emergency Services**
2. The County will follow the policies included in the adopted ~~emergency~~ **County of Stanislaus Multi-Jurisdictional Hazard Mitigation Plan**. New development shall not conflict with policies included in that document.  
**Responsible Departments: Sheriff, Office of Emergency Services / Fire Warden, Planning**
3. The County will make information available to landowners in areas subject to flooding to help them form a flood control district.  
**Responsible Department: Planning ~~Public Works~~**
4. Development, except that which is consistent with the County General Plan at the time the Patterson Agreement is executed, in the area known as the Sperry Avenue Corridor, shall be required to participate in the solution of the Salado Creek flooding problem.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
5. In the event of a major ~~threat, wildfire threatening the towns of Knight's Ferry or La Grange,~~ the Sheriff, **Office of Emergency Services / Fire Warden, and Fire Safety Departments and the Local Fire Agency having jurisdiction** may mandate and coordinate evacuation of ~~these towns~~ **the threatened area**.  
**Responsible Departments: Sheriff, ~~Fire Safety Office of Emergency Services / Fire Warden, Local Fire Agency Having Jurisdiction, Emergency Services~~**

6. The County has adopted a Multi-Jurisdictional Hazard Mitigation Plan, and will implement and evaluate the Plan on a regular basis as necessary to comply with state and federal laws. **This includes implementing the mitigation actions of the Plan through the Safety Element.**  
**Responsible Department: Office of Emergency Services / Fire Warden**

## POLICY TWO

Development should not be allowed in areas that are within the designated floodway **or any areas that are known to be susceptible to being inundated by water from any source.**

(Comment: The Federal Emergency Management Agency (FEMA) has developed floodway maps which identify areas prone to flooding.)

## IMPLEMENTATION MEASURES

1. Development within the 100-year flood boundary shall meet the requirements of Chapter ~~16.40~~ **16.50** (Flood Damage ~~Protection~~ **Prevention**) of the County Code and within the designated floodway shall obtain ~~Reclamation Board~~ **Central Valley Flood Protection Board** approval.  
**Responsible Departments: ~~Planning Public Works~~, Planning Commission, Board of Supervisors**
2. The County shall utilize the California Environmental Quality Act (CEQA) process to ensure that development does not occur that would be especially susceptible to flooding. Most discretionary projects require review for compliance with CEQA. As part of this review, potential impacts must be identified and mitigated.  
**Responsible Departments: Public Works, Planning, Planning Commission, Board of Supervisors**
3. **The County shall amend its Zoning Ordinance, as needed, for compliance with the Central Valley Flood Protection Act of 2008 (and any subsequent amendments.)**  
**Responsible Departments: Public Works, Planning, Planning Commission, Board of Supervisors**

## POLICY THREE

Development should not be allowed in areas that are particularly susceptible to seismic hazard.

## IMPLEMENTATION MEASURES

1. The County shall enforce the Alquist-Priolo Earthquake Fault Zoning Act.  
**Responsible Departments: ~~Building Inspection~~ Planning, Planning Commission, Board of Supervisors**
2. Development in areas of geologic hazard shall be considered for approval only where the development includes an acceptable evacuation route.  
**Responsible Departments: Public Works, Sheriff, ~~Fire Safety Office of Emergency Services / Fire Warden~~, Local Fire Agency Having Jurisdiction, ~~Emergency Services~~, Planning, Planning Commission, Board of Supervisors**

3. Development proposals adjacent to reservoirs shall include evaluations of the potential impacts from a seismically induced seiche.  
**Responsible Departments: Parks and Recreation, Planning, Planning Commission, Board of Supervisors**
4. The routes of new public roads in areas subject to significant seismic hazard shall be designed to minimize seismic risk.  
**Responsible Departments: Public Works, Planning Commission, Board of Supervisors**
5. Where it is found that right-of-way widths greater than those specified in the Circulation Element are necessary to provide added safety in geologically unstable areas, additional width shall be required.  
**Responsible Departments: Public Works, Planning, Planning Commission, Board of Supervisors**

#### **POLICY FOUR**

Development west of I-5 in areas susceptible to landslides (as identified in this element) shall be permitted only when a geological report is presented with (a) documented evidence that no such potential exists on the site, or (b) identifying the extent of the problem and the mitigation measures necessary to correct the identified problem.

#### **IMPLEMENTATION MEASURES**

1. The County shall utilize the California Environmental Quality Act (CEQA) process to ensure that development does not occur that would be especially susceptible to landslide. Most discretionary projects require review for compliance with CEQA. As part of this review, potential impacts must be identified and mitigated or a statement of overriding concerns adopted.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
2. Development west of I-5 shall include a geological report unless the Chief Building Official ~~and Planning Director~~ **are** satisfied that no need for the study is present.  
**Responsible Departments: Planning, ~~Building Inspection~~**
3. The routes of new public **and private** roads in areas subject to landslides shall be designed to minimize landslide risks.  
**Responsible Departments: Public Works, Planning Commission, Board of Supervisors**

#### **POLICY FIVE**

Stanislaus County shall support efforts to identify and rehabilitate structures that are not earthquake resistant.

#### **IMPLEMENTATION MEASURE**

1. The County shall take advantage of programs that would provide funds to identify and rehabilitate structures that do not currently meet building standard minimums for earthquake resistance.  
**Responsible Departments: Chief Executives Office, ~~Building Inspection~~ Planning, Board of Supervisors**

**GOAL TWO**

Minimize the effects of hazardous conditions that might cause loss of life and property.

**POLICY SIX**

All new development shall be designed to reduce safety and health hazards.

**IMPLEMENTATION MEASURES**

1. Review development proposals and require redesign when necessary to ensure that buildings are designed and sited to minimize crime and assure adequate access for emergency vehicles. **The County shall promote the design of structures, streetscapes, pathways, project sites, and other elements of the built environment that allow for surveillance of publically accessible areas.**  
**Responsible Departments: Sheriff, Fire-Safety Office of Emergency Service / Fire Warden, Local Fire Agency Having Jurisdiction**
2. Fencing shall be required between canals and new urban development when recommended by an irrigation district.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
3. Development standards shall be imposed to provide street lighting, storm drainage, **adequate** setbacks, fire walls **and fire safe standards for defensible space, pursuant to California Code of Regulations Title 14, Fire Safe Regulations.**  
**Responsible Departments: Public Works, Planning, Fire-Safety Office of Emergency Services / Fire Warden, Local Fire Agency Having Jurisdiction, Planning Commission, Board of Supervisors**
4. All building permits shall be reviewed to ensure compliance with the ~~Uniform Building Code~~ **California Code of Regulation, Title 24, California Building Codes, and California Code of Regulations Title 14, Fire Safe Regulations.**  
**Responsible Departments: Building-Inspection Planning, Local Fire Agency Having Jurisdiction**

**POLICY SEVEN**

Adequate fire and sheriff protection shall be provided.

**IMPLEMENTATION MEASURES**

1. The County shall continue to implement the funding strategies **for Capital Improvements and ongoing operations as** identified under Policy ~~Twenty-Two~~ **Four** of the Land Use Element.  
**Responsible Departments: Public Works, Building-Inspection, Planning, Board of Supervisors**

2. All discretionary projects in the County shall be referred to the ~~Fire Safety Department and to the appropriate fire district~~ **Office of Emergency Services / Fire Warden, and the Local Fire Agency having jurisdiction** for comment. The comments of these agencies will be used to condition or recommend modifications of the project as it relates to fire safety and rescue issues, **including emergency access and evacuation routes. All projects in State Responsibility Areas or Very High Fire Hazard Severity Zone shall be routed to CALFire for comments.**  
**Responsible Departments: ~~Fire Safety Office of Emergency Services / Fire Warden, Local and State Fire Agency Having Jurisdiction, Building Inspection, Planning~~**
3. The County ~~Fire Safety Department~~ **Fire Warden and the Local Fire Agency having jurisdiction** shall work with the California Department of Forestry and Fire Protection and with local fire ~~districts~~ **agencies** to minimize the danger from wildfire **by establishing adequate fire suppression, setbacks, and other requirements pursuant to California Code of Regulations Title 14, Fire Safe Regulations. All building permits and discretionary projects located within State Responsibility Areas and Very High Fire Hazard Severity Zones, the Strategic Fire Plans of the local and adjoining jurisdictions CalFire units shall be followed.**  
**Responsible Departments: ~~Fire Safety Office of Emergency Services / Fire Warden, Local and State Fire Agency Having Jurisdiction~~**
4. Discretionary projects ~~outside of fire districts~~ shall be considered for approval only when they are found to include adequate fire protection.  
**Responsible Departments: ~~Fire Safety Office of Emergency Services / Fire Warden, Local Fire Agency Having Jurisdiction, Planning, Planning Commission, Board of Supervisors~~**
5. New development, ~~other than agricultural,~~ shall have **adequate** water to meet the fire flow standards established in ~~Appendix 5-A~~ **the current adopted fire code, and the current California Public Resources Code 4290, and when located within the State Responsibility Area and Very High Fire Hazard Severity Zones, the National Fire Protection Association 1142 Standard on Water Supplies for Suburban and Rural Fire Fighting.**  
**Responsible Departments: ~~Fire Safety Office of Emergency Services / Fire Warden, Local and State Fire Agency Having Jurisdiction, Planning, Planning Commission, Board of Supervisors~~**
6. All discretionary projects shall be referred to the Sheriff's Department for comment **and evaluation of security features including crime prevention through design.** Comments from the Sheriff will be used to either condition or modify the project.  
**Responsible Departments: ~~Sheriff, Planning, Planning Commission, Board of Supervisors~~**



7. All building permits and discretionary projects within the State Responsibility Areas **and Very High Fire Hazard Severity Zones**, as identified by the **current** California Department of Forestry and Fire Protection **Fire Hazard Severity Zone maps**, shall meet the minimum **State** development standards, ~~included in Article 1-5, Subchapter 2 SRA Fire Safe Regulations, Chapter 7 Fire Protection, Division 1.5 Department of Forestry, Title 14 Natural Resources, including the current chapters of the California Fire Code regarding requirements for wild land – urban interface fire areas, the California Building Code and Residential Code Materials and Construction Methods for Exterior Wildfire Exposure, and California Code of Regulations Title 14, Fire Safe Regulations~~, or more stringent specific standards as may be adopted by the Board of Supervisors for this County.  
**Responsible Departments: Public Works, ~~Building Inspection~~, Planning, Fire Safety Office of Emergency Services / Fire Warden, Local Fire Agency Having Jurisdiction, Planning Commission, Board of Supervisors, CalFire**
8. All discretionary projects shall be referred to the ~~Regional Emergency Medical Services Office~~ **Agency Local Emergency Medical Services Agency** for comments related to ambulance service.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**

## POLICY EIGHT

Roads shall be maintained for the safety of travelers.

## IMPLEMENTATION MEASURES

1. New urban development shall provide street lighting, storm drainage, setbacks, ~~fire walls~~, and other safety features as the specific case may require **for all modes of travel (automobile, pedestrian, bicycle, etc.)**.  
**Responsible Departments: Public Works, ~~Fire Safety Office of Emergency Services / Fire Warden, Local Fire Agency Having Jurisdiction~~, Planning Commission, Board of Supervisors**
2. New development shall conform to the standards in the County **Department of Public Works** Specifications and Improvement Standards for maintenance and improvement of roads.  
**Responsible Departments: Public Works, Planning Commission, Board of Supervisors**
3. The Sheriff's Department shall enforce California Vehicle Code Section 23114 related to material falling from overloaded trucks carrying sand, gravel and other materials.  
**Responsible Department: Sheriff**
4. Private access roads in the State Responsibility Areas, as designated by the California Department of Forestry and Fire Protection, shall be designed to meet state-mandated standards for such roads **and all requirements under California Code of Regulations Title 14, Fire Safe Regulations**.  
**Responsible Departments: ~~Fire Safety Office of Emergency Services / Fire Warden, Local Fire Agency Having Jurisdiction~~, Planning, Planning Commission, Board of Supervisors**
5. Private access roads in agricultural parcel maps should not include "dead ends" longer than one mile.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**

## POLICY NINE

The County shall support the formation of improvement districts (including flood control districts) **or overlay zones** to ~~eliminate~~ **mitigate** safety hazards.

### IMPLEMENTATION MEASURES

1. Fire ~~Districts~~ **Agencies**, Sheriff's Department, etc. should be encouraged to request that the Board of Supervisors impose development fees to help support **capital needs**. ~~their services~~. Such requests shall be accompanied by supporting documentation.  
**Responsible Departments:** ~~Fire Safety Office of Emergency Services / Fire Warden, Local Fire Agency Having Jurisdiction, Sheriff, County Chief Executive Office, Board of Supervisors~~
2. The County will work with ~~the Fire Safety Department~~ the State Department of Forestry and Fire Protection and **the local fire districts agencies having jurisdiction** to ensure that adequate fire suppression measures are provided in areas without access to a public water system. These measures may include restrictions on building materials as well as the provision of adequate access and appropriate facilities for suppressing a fire.  
**Responsible Departments:** ~~Fire Safety Office of Emergency Services / Fire Warden, Local Fire Agency Having Jurisdiction, Building Inspections, Planning, Board of Supervisors~~
3. **The County may consider the adoption of overlay zones for the purpose of alerting property owners to restrictions relating to safety hazards.**  
**Responsible Departments:** ~~Planning, Planning Commission, Board of Supervisors~~

## POLICY TEN

The County shall limit the siting of air strips.

### IMPLEMENTATION MEASURE

1. The County policy regarding the siting of air strips shall be enforced. (See Appendix ~~V-A5-B~~)  
**Responsible Departments:** ~~Planning, Planning Commission, Board of Supervisors~~
2. **Development proposals for the establishment of an air strip shall include easements to restrict development on neighboring properties as required by County policy. The developer shall document existing easements and demonstrate the ability to acquire additional easements, if needed, prior to project approval. Projects shall be conditioned to require easements be recorded prior to development of the air strip.**  
**Responsible Departments:** ~~Planning, Planning Commission, Board of Supervisors~~

## POLICY ELEVEN

Restrict large communication **and wind power facilities** ~~antennas~~ within the agricultural area with respect to maximum height, markings (lights) and location to provide maximum safety levels.

## IMPLEMENTATION MEASURES

1. ~~All communication facilities shall meet the siting standards established by Chapter 21.90 -Communication Facilities of the Zoning Ordinance. An amendment to the A-2 (General Agriculture) zoning districts will be processed by June 30, 1995 to require that, before communication towers are approved, a finding must be made that measures have been taken to minimize the effect of the tower on crop dusting activities. (On September 19, 1995, the Board of Supervisors approved an amendment to the zoning ordinance establishing siting standards for communication towers in all zoning districts.)~~  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
2. **Discretionary development proposals** ~~Use permit applications~~ for communication towers and wind power facilities in the A-2 (General Agriculture) zone district shall be referred to the crop dusting companies which typically service the area of the proposed tower for notice and comment.  
**Responsible Department: Planning**

## POLICY TWELVE

The Airport Land Use Commission Plan and County Airport Regulations (Chapter 17 of the County Code) shall be updated as necessary, maintained and enforced.

## IMPLEMENTATION MEASURES

1. Development within areas protected by the Airport Land Use Commission Plan shall only be approved if they meet the requirements of the Plan.  
**Responsible Departments: Planning, Airport Land Use Commission, Planning Commission, Board of Supervisors**
2. The Airport Land Use **Commission** Plan shall be updated, **as necessary**, to conform to current state **and federal** law ~~when funds are budgeted for the project.~~  
**Responsible Departments: Planning, Airport Land Use Planning Commission**
3. All amendments to a land use designation, zoning district, or zoning regulation affecting land within the Airport Land Use Plan boundary shall be referred to the Airport Land Use Commission for comment. If that commission recommends denial, the Board of Supervisors may overrule that recommendation only by a two-thirds majority vote.  
**Responsible Departments: Planning, Airport Land Use Commission, Board of Supervisors**
4. The height and exterior materials of new structures, **protected by the Airport Land Use Commission Plan** ~~in the Airport Zone of the Modesto, Oakdale, Patterson or Turlock airports as defined in the Stanislaus County Airport Regulations,~~ shall be reviewed to determine whether they conform to those regulations.  
**Responsible Departments: Planning, Board of Supervisors**

## POLICY THIRTEEN

The Department of Environmental Resources shall continue to coordinate efforts to identify locations of hazardous materials and prepare and implement plans for management of spilled hazardous materials as required.

## IMPLEMENTATION MEASURES

1. The County will continue to provide planning efforts to locate and minimize the effects of hazardous materials through the County's adopted emergency plan.  
**Responsible Department: Environmental Resources**
2. The County has prepared a Hazardous Waste Management Plan which is the guideline for managing hazardous waste in this County. The goals, objectives, conclusions, recommendations and implementation measures of that plan are hereby incorporated as a part of the Safety Element, along with any modifications which may result from state review of the Hazardous Waste Management Plan.  
**Responsible Departments: Board of Supervisors, Environmental Resources**
3. The Area Plan for Emergency Response to Hazardous Substance Release, required by the California Health and Safety Code, will be incorporated as part of the Safety Element when that plan is adopted.  
**Responsible Departments: Environmental Resources, ~~Fire Safety~~, Sheriff, Office of Emergency Services / Fire Warden**

## POLICY FOURTEEN

The County will continue to enforce state-mandated structural Health and Safety Codes, including but not limited to the ~~Uniform California~~ Building Code, the ~~Uniform Housing International Property Maintenance~~ Code, the ~~Uniform California~~ Fire Code, the ~~Uniform California~~ Plumbing Code, ~~the National California~~ Electric Code, and Title 24, **Parts 1-9**.

(Comment: The ~~Uniform California~~ Building Code includes provisions for safe construction under the most current standards. The ~~Uniform Housing International Property Maintenance~~ Code provides for upgrading of existing dwellings to eliminate health and safety problems without requiring upgrading of non-hazardous conditions.)

## IMPLEMENTATION MEASURES

1. All building permits shall be reviewed to ensure compliance with the ~~Uniform California~~ Building Code.  
**Responsible Department: ~~Building Inspections~~ Planning**
2. All complaints of substandard dwellings shall be acted upon to ensure compliance with the ~~Uniform Housing International Property Maintenance~~ Code.  
**Responsible Departments: ~~Building Inspections~~, Environmental Resources, Planning**
3. The ~~Uniform California~~ Fire Code shall be followed in inspections and maintenance of structures regulated under that code.  
**Responsible Departments: ~~Fire Safety~~ Office of Emergency Services / Fire Warden, Local Fire Agency Having Jurisdiction**

## **POLICY FIFTEEN**

The County will support the Federal Emergency Management Agency (FEMA) Flood Insurance Program so that residents who qualify may purchase such protection.

(Comment: If Stanislaus County adopts a flood hazard reduction ordinance that meets FEMA standards, property owners whose property is located within certain areas identified by FEMA as flood hazard areas may purchase insurance against flood damage. Chapter ~~16.40~~ **16.50** of the Stanislaus County Code meets the FEMA standards.)

## **IMPLEMENTATION MEASURE**

1. Stanislaus County will maintain and enforce Chapter ~~16.40~~ **16.50** (Flood Damage ~~Protection~~ **Prevention**) of the County Code to meet FEMA standards.  
***Responsible Departments: Public Works, Board of Supervisors***

## **APPENDIX 5-A**

### **FIRE FLOW STANDARDS**

#### New or Existing Water Systems

New development shall not be permitted to diminish the fire flow of an existing water system below the following minimum standards, established in the current adopted Fire Code.

1. \_\_\_\_\_ Lot density of three or more single-family residential units per acre. \_\_\_\_\_ 1,000 gpm
2. \_\_\_\_\_ Duplex residential units, neighborhood business of one story. \_\_\_\_\_ 1,500 gpm
3. \_\_\_\_\_ Multiple residential, one and two stories; light commercial or light industrial. \_\_\_\_\_ 2,000 gpm
4. \_\_\_\_\_ Multiple residential, three stories or higher; heavy commercial or heavy industrial. \_\_\_\_\_ 2,500 gpm

New water systems also must meet the minimum fire flow standards established above in the current adopted Fire Code.

Exception: With the installation of an approved, supervised, automatic sprinkler system in accordance with the National Fire Protection Association Pamphlet #13, throughout the building, a 50% reduction may be granted. In no case shall there be less than 500 gpm provided on site.

#### No Existing Water System

Where there is no established water system, in the rural areas of Stanislaus County, the following guidelines shall apply:

The installation of reservoirs, pressure tanks, elevator tanks, or other fixed systems capable of supplying the required fire flow and/or static source shall be in accordance with the National Fire Protection Association Pamphlet #1231, Water Supplies for Rural and Suburban Fire Fighting.

Source: Stanislaus County Fire Warden's Office

**APPENDIX ~~V-A5-B~~**  
**AIRPORT SITING STANDARDS**



THE BOARD OF SUPERVISORS OF THE COUNTY OF STANISLAUS  
STATE OF CALIFORNIA

Date: March 6, 1984

No. 84-367

On motion of Supervisor Blom, Seconded by Supervisor Simon, and approved by the following vote,  
Ayes: Supervisors: Blom, Simon, Cannella and Chairman Starn  
Noes: Supervisors: None  
Excused or Absent: Supervisors: Terry  
Abstaining: Supervisor: None

D-2

THE FOLLOWING RESOLUTION WAS ADOPTED:

IN RE: ESTABLISHING POLICIES FOR THE SITING OF NEW AIRPORTS, AGRICULTURAL SERVICE AIRPORTS AND TEMPORARY AGRICULTURAL SERVICE AIRPORTS

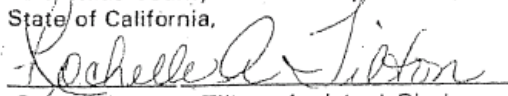
WHEREAS, after receiving a report concerning private airports in Stanislaus County, this Board referred the matter to the Planning Commission for study and possible recommendations; and

WHEREAS, the Commission held a public hearing to gain input from private airport owners, pilots, cropdusters and other interested parties; and

WHEREAS, after much discussion, the Planning Commission recommends that this Board adopt the "Establishing Policies for the Siting of New Airports, Agricultural Service Airports and Temporary Agricultural Service Airports" as submitted,

NOW, THEREFORE, BE IT RESOLVED that this Board of Supervisors does hereby adopt the "Establishing Policies for the Siting of New Airports, Agricultural Service Airports and Temporary Agricultural Service Airports" to wit:

ATTEST: BETH MEYERSON-MARTINEZ, Clerk  
Stanislaus County Board of Supervisors,  
State of California,



By: Rochelle A. Tilton, Assistant Clerk

5-14  
V-28

File No. S-18-CC-27

ESTABLISHING POLICIES FOR THE SITING OF NEW  
AIRPORTS, AGRICULTURAL SERVICE AIRPORTS, AND TEMPORARY  
AGRICULTURAL SERVICE AIRPORTS

WHEREAS, it is the duty of the Stanislaus County Board of Supervisors to promote and protect the health, safety, comfort, convenience and general welfare of the residents of Stanislaus County; and

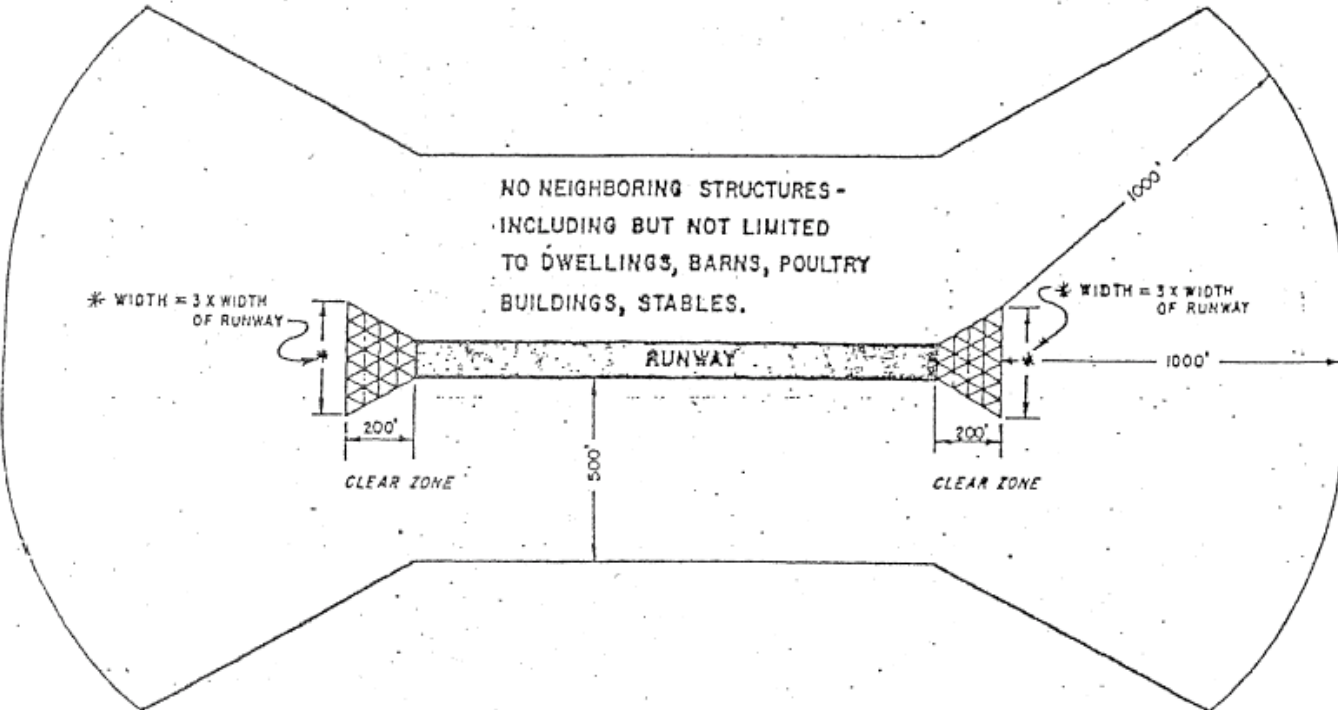
WHEREAS, private airstrips, private airports, crop duster landing strips and heliports are presently permitted upon approval of a use permit in A-2 (Exclusive Agriculture) and certain R-A (Rural Residential) zones; and

WHEREAS, the Board of Supervisors recognizes the fact that airports, agricultural service airports and temporary agricultural service airports are necessary for the economy and convenience of the people of Stanislaus County; and

WHEREAS, careful consideration must be given to the siting, layout and design of any new airport, agricultural service airport or temporary agricultural service airport in these areas to protect the health, safety, comfort, and general welfare of the residents of Stanislaus County,

NOW, THEREFORE, BE IT RESOLVED that the following policies shall be utilized as guidelines by Stanislaus County when considering an application for a use permit or staff approval application to locate any new airport or temporary agricultural service airport or expand any existing airport or temporary agricultural service airport.

1. Provide a clear zone for a distance of two-hundred feet (200') from the end of the runway. The clear zone shall start at the ends of the runway and at a point two-hundred feet (200') from the end of the runway be three (3) times the width of the runway.
2. Be no closer to any neighboring dwelling, barn, shop, poultry building, or similar agricultural structure than: (a) 1000 feet from the ends of the runway, or (b) 500 feet to the sides of the runway. This shall not be construed so as to prohibit the owner of any airport from having their own dwelling(s), barn(s), shop(s), poultry building(s), or similar agricultural structure(s) within this area.
3. Be located so that air or surface traffic shall not constitute a nuisance or danger to neighboring property, farms, dwellings or structures.
4. Show that adequate controls or measures will be taken to prevent offensive dust, noise, vibrations, or bright lights.
5. Obtain when necessary approval of the California Department of Transportation, Division of Aeronautics and the Federal Aviation Administration prior to the issuance of the use permit.



## **Agricultural Element**

### **Chapter 7 Seven**

## **AGRICULTURAL ELEMENT**

### **INTRODUCTION**

Agriculture is the leading industry in Stanislaus County generating an annual gross agricultural value in excess of a billion dollars into the local economy. This initial value of farm production has a ripple, or multiplier, effect in the economy by generating related activities such as food processing, retail and wholesale trade, marketing, transportation, and related services. Located in the Central Valley, which has long been known as California's agricultural heartland, Stanislaus County consistently ranks among the top ten agricultural counties in the state. Stanislaus County also plays a major role in agriculture at the national level, based on market value of agricultural product sold.

The success of agriculture in Stanislaus County is largely due to our favorable climate and the flat, fertile soils that comprise the resource base of our biggest industry. The availability of affordable, high quality irrigation water and low-cost electrical power also gives local agriculture a competitive advantage. Agriculture in Stanislaus County is characterized by a broad diversity of commodities. While overall production trends for leading commodities have continued to grow, these trends are not always reflective of the overall health of agriculture in Stanislaus County.

The same elements that make Stanislaus County so well suited for agriculture -favorable climate, flat land, available water and low-cost power - also make the County attractive for urban development. Like other areas of the Central Valley, the County has become a magnet for those in search of affordable housing within commuting distance of the San Francisco Bay Area and other major employment centers.

Confronted with unprecedented population growth, diminishing agricultural resources, and increased production costs, it can no longer be assumed local agriculture will always be a major supplier to the nation with fresh fruits and vegetables and remain the mainstay of our economy. The challenge of solving the problems confronting agriculture in Stanislaus County requires the coordinated efforts of both government and private citizens. The goals to sustain a healthy agricultural economy, conserve our agricultural land, and protect our natural resources are goals for which our community as a whole can strive, from which our community as a whole will benefit.

#### **Purpose**

The purpose of the Agricultural Element is to promote and protect local agriculture through the adoption of policies designed to achieve three main goals:

1. Strengthen the agricultural sector of our economy.
2. Conserve our agricultural lands for agricultural uses.
3. Protect the natural resources that sustain agriculture in Stanislaus County.

The policies are intended to provide clear guidelines for County decision-making. The policies also are intended to express the County's commitment to specific programs and strategies that will ensure the continued success of our agricultural industry and productivity of our agricultural lands.

### **Focus**

The overall focus of the Agricultural Element is on the mitigation of negative economic and environmental impacts to agricultural land and the natural resources needed to support local agriculture. The Agricultural Element establishes policies to protect the economy of Stanislaus County by minimizing conflicts between agriculture, the environment, and urban development. By minimizing the impacts of urbanization on agriculture, the County will help protect local agriculture and ensure its continued success.

### **Scope**

This document represents a broad-based effort to analyze the status of local agriculture, address agricultural issues, consolidate existing County policies and propose strategies to solve problems that exist. Not limited to land use issues, this document goes beyond the scope of most agricultural elements to include strategies for economic development and resource protection related to agriculture. Because of its comprehensive approach, this document can be considered a strategic plan for agriculture in Stanislaus County.

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

In recognition of the importance of agriculture to our local economy, the Stanislaus County General Plan includes an Agricultural Element to promote and protect local agriculture. Under Section 65303 of the California Government Code, optional elements of the General Plan, are authorized but not mandated by the state legislature. The Agricultural Element is coordinated with several other elements of the General Plan and must be consistent with the entire General Plan. It interacts primarily with agriculture-related policies of the Land Use, Conservation/Open Space, and Housing Elements. To avoid duplication, policies in these elements that affect or relate to agriculture are not repeated in this element. However, such policies are cross-referenced whenever appropriate. The policies in this document have the same legal status as any state-mandated element of the general plan.

### **Review Period**

The adoption of the Agricultural Element reflects the County's commitment for a strong agricultural economy. As a means of insuring the goals, objectives, policies, and implementation measures of this document remain relevant to the needs of local agriculture, periodic review of the this document is required. Adoption of this document includes a commitment to reviewing it every five years. Reviews shall be conducted by the Agricultural Advisory Board with assistance from both the County Agricultural Commissioner's Office and the Planning Department.

**GOAL ONE**

Strengthen the agricultural sector of our economy.

Growth in Stanislaus County is both an opportunity for local agriculture and a threat to its stability. There are opportunities to expand markets for local agricultural products and opportunities for the expansion of existing businesses and the formation of new enterprises. However, growth typically results in increased conflicts between farm and non-farm residents as well as contributing to the loss of productive farmland, the deterioration of air quality, increased competition for water supplies and other resource problems.

Goal one addresses these opportunities and threats by presenting strategies for agriculture-related economic development. These strategies include ways to improve marketing and promotion, provide education and technical assistance, minimize conflicts between farm and non-farm residents, provide adequate housing for farm workers, and ensure food safety.

Because many of these issues are not unique to Stanislaus County alone, but involve the entire Central Valley, the close cooperation of local governments through a voluntary multi-county association or confederation is essential for the continued success of agriculture and the health of our regional economy as a whole.

**OBJECTIVE NUMBER 1.1: Enhance the marketing and promotion of agriculture in Stanislaus County**

The ability to market and promote agriculture on both a county-wide and farm level is essential to the success of agriculture in Stanislaus County. Direct marketing is one method farmers can use to gain market control, but for many crops a local infrastructure for marketing and promotion is needed for success. This local infrastructure is comprised of land, services, and the workforce needed for support industries such as food-processors, manufactures, distributors, suppliers, and retailers. A key factor to attracting and retaining the necessary infrastructure includes a strong local focus on economic development.

Stanislaus County plays an active role in economic development through its participation with private industry in efforts to add value to existing local economic development programs. The ability to market the productivity of agriculture in Stanislaus County is essential to the development of the support industry needed to enhance the sales of agricultural products. Marketing boards for the various agricultural commodities grown and raised in Stanislaus County serve as a link between the farmer, processor, and consumer.

Efforts to highlight the rich agricultural heritage of Stanislaus County help to bridge the gap between consumers and farmers by promoting the value of agriculture to the community as a whole. With the increase in population, the majority of Stanislaus County citizens now reside in urban areas. Clearly community education of farming practices and the economic role of agriculture is important to the long-term health of agriculture as an industry in Stanislaus County. Direct marketing provides an opportunity for farmers to deliver their products directly to consumers, while allowing the farmer to maximize revenues.



The County supports direct marketing opportunities through the permitting of produce stands and produce markets meeting adopted standards and incidental retail sales and tasting rooms in conjunction with authorized agricultural processing facilities in the agricultural zoning district. For many consumers farm-based direct marketing offers them their only physical connection to agriculture. However, to limit the potential for conflict, the county must take measures to insure direct marketing is conducted in a manner which promotes the health, safety, and welfare of both county residents and agricultural business in the county.

In addition to a strong local market, a strong export market for Stanislaus County agricultural products is a key element to sustaining our agricultural economy. Each year an increasing amount of agricultural products grown in and raised in Stanislaus County are shipped worldwide. Economic development efforts assist companies interested in exporting local agricultural products. In addition to local efforts, the County encourages state and federal efforts to expand agricultural export programs.

#### **POLICY 1.1**

Efforts to promote the location of new agriculture-related business and industry in Stanislaus County shall be supported.

#### **IMPLEMENTATION MEASURE**

1. The County shall continue to participate in economic development efforts to bring new agriculture-related business and industry to Stanislaus County.  
**Responsible Departments: Board of Supervisors**

#### **POLICY 1.2**

The marketing and promotion of local agricultural products shall be encouraged.

#### **IMPLEMENTATION MEASURES**

1. The County shall continue to implement existing ordinance provisions relating to direct-marketing of locally grown produce.  
**Responsible Departments: Agricultural Commissioner, Environmental Resources, Planning, Planning Commission, Board of Supervisors**
2. The County shall encourage efforts to establish direct marketing programs and a market identity for Stanislaus County.  
**Responsible Departments: Chief Executive Office, Planning, Board of Supervisors**
3. The County shall encourage the presence of agricultural marketing boards in Stanislaus County.  
**Responsible Departments: Chief Executive Office, Planning, Board of Supervisors**



### **POLICY 1.3**

Efforts to expand markets for the export of local agricultural products shall be encouraged.

### **IMPLEMENTATION MEASURE**

1. The County shall support and encourage efforts to create and expand export programs which seek to expand markets for commodities produced in Stanislaus County.  
***Responsible Departments: Agricultural Commissioner's Office, Board of Supervisors.***

### **OBJECTIVE NUMBER 1.2: Support the development of agriculture-related uses**

Given its broad diversity, Stanislaus County agriculture involves a variety of commercial and industrial activities and requires a range of supplies and services. Roadside stands, processing services, maintenance and repair of farm machinery and equipment, custom farming services and similar agriculture-related uses are all important for the success of agriculture.

Some of these activities and support services may be most appropriately located on agricultural lands, where they are convenient and accessible to farmers and ranchers. On the other hand, some of these uses may interfere with agricultural operations. The determination of which commercial activities and support services belong on agricultural lands depends on their connection to agriculture, the potential for conflicts, the size, scale and adaptability of the use, and the amount of land lost to farming.

The A-2 (General Agriculture) zoning district of the County Zoning Ordinance encourages vertical integration of agriculture by organizing uses requiring use permits into three tiers based on the type of uses and their relationship to agriculture. Tier one includes uses closely related to agriculture such as nut hulling and drying, wholesale nurseries, and warehouses for storage of grain and other farm produce grown on-site or in proximity to the site. Tier two includes uses such as agricultural service establishments serving the immediately surrounding area and agricultural processing plants of limited scale. Tier three includes uses that are not directly related to agriculture but may be necessary to serve the A-2 district or difficult to locate in urban areas. Since tier three uses can be people-intensive and thus can adversely impact agriculture, they are generally directed to lands within LAFCO-adopted Spheres of Influence.

Agricultural service establishments designed to serve the immediate area and agricultural processing plants such as wineries and canneries are allowed when the Planning Commission finds that (1) they will not be substantially detrimental to or in conflict with the agricultural use of other property in the vicinity; (2) the establishment as proposed will not create a concentration of commercial and industrial uses in the vicinity; and (3) it is necessary and desirable for such establishment to be located within the agricultural area as opposed to areas zoned commercial or industrial. Limited visitor-serving commercial uses including retail sales, tasting rooms and/or facilities for on-site consumption of agricultural products are allowed in conjunction with agricultural processing facilities.

In general, agricultural service establishments can be difficult to evaluate due to their wide diversity of service types and service areas. This diversity often leads to requests for uses which provide both agricultural and non-agricultural services and/or have a wide-spread service area. Maintaining a focus on production agriculture is key to evaluating agricultural service

establishments in the agricultural area. In order to control the scale and intensity of processing facilities, such as wineries and canneries, the County requires such facilities in the agricultural area to show a direct connection to production agriculture in Stanislaus County and applies limitations on the number of employees.

Visitor-serving commercial uses can be especially problematic. Direct marketing and promotion of local products is beneficial to the agricultural industry, yet the people who come to enjoy the rural setting may interfere with necessary farming practices. This "people versus practice" conflict makes it necessary to limit the location and intensity of visitor-serving commercial uses in agricultural areas.

#### **POLICY 1.4**

Limited visitor-serving commercial uses shall be permissible in agricultural areas if they promote agriculture and are secondary and incidental to the area's agricultural production.

#### **POLICY 1.5**

Agricultural service establishments shall be permissible in agricultural areas if they are designed to serve production agriculture in the immediately surrounding area as opposed to having a widespread service area, and if they will not be detrimental to agricultural use of other property in the vicinity.

#### **POLICY 1.6**

Processing facilities and storage facilities for agricultural products either grown or processed on the site shall be permissible in agricultural areas.

#### **POLICY 1.7**

Concentrations of commercial and industrial uses, even if related to surrounding agricultural activities, are detrimental to the primary use of the land for agriculture and shall not be allowed.

#### **POLICY 1.8**

To encourage vertical integration of agriculture, the County shall allow research, production, processing, distribution, marketing, and wholesale and limited retail sales of agricultural products in agricultural areas, provided such uses do not interfere with surrounding agricultural operations.

#### **IMPLEMENTATION MEASURE**

1. The County will continue to implement its existing General Agriculture (A-2) zoning provisions for agriculture-related uses consistent with policies 1.6 - 1.10 of the Agricultural Element.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**

**OBJECTIVE NUMBER 1.3: Minimizing Agricultural Conflicts:**

Urbanization and the proliferation of rural residences throughout the County has led to increased conflicts over agricultural operations. Homeowners complain about noise, odors, flies, chemical spraying and similar impacts of commercial agricultural practices; farmers complain about vandalism, theft and trespassing on farm properties. To minimize these conflicts, the County can implement a variety of tools designed to minimize the interaction between people and agriculture which results in the conflict. These tools include continuing to implement its right-to-farm ordinance, requiring buffers between non-agricultural development and adjacent agricultural operations, and establishing setbacks from agricultural zones.

Stanislaus County is one of many counties in California to have enacted a right-to-farm ordinance to protect farmers from nuisance suits as a result of normal farming practices. The ordinance requires disclosure to home buyers in farming areas that they are subject to noise, dust, odors, and other impacts of commercial agricultural operations. The ordinance also provides a notification system to make residents more aware of the right-to-farm policy and provides a voluntary agricultural grievance procedure as an alternative to court proceedings.

In practice, the right-to-farm ordinance primarily serves as a tool for making adjacent landowners aware of a right which cannot be fully protected by the ordinance. When faced with non-agricultural development in agricultural areas, farmers often lose their rights to implement normal farming practices, such as spraying, due to the increased risk of exposure to surrounding people. Without question, the right-to-farm ordinance is a critical tool in the effort to protect agricultural land, but beyond awareness it is limited in the true protection it can provide. The success of the right-to-farm ordinance is dependent on supporting policies limiting non-agricultural development in and around agricultural areas.

To lessen the impacts of development by minimizing conflicts between agricultural and non-agricultural uses, buffers should be required when incompatible development is approved in or adjacent to agricultural areas. A buffer is a physical separation such as a topographic feature, a substantial stand of trees, a water course, a landscaped berm or similar feature. Buffers serve as both a physical and visual barrier between agricultural uses and the people in non-agricultural areas. By separating incompatible uses, a buffer minimizes the impacts of non-agricultural development on surrounding agricultural operations and decreases the likelihood of conflict. Buffers are not intended to stop people from entering an area, but rather to limit people as a means of avoiding a situation where conflict is known. Buffers need to take into account 'no spray' policies enforced by the Agricultural Commissioner.

Setbacks from agricultural zones also help minimize conflicts over agricultural practices. For example, standards for residential zones may be amended to require all structures be setback a specified distance from an adjacent agricultural zone. Standards will need to take into account existing residential areas where lots may be too small to accommodate effective setbacks. However, the purpose for adopting setback standards is to insure existing circumstances which have resulted in conflict over agricultural practices are not repeated. As with buffers, setbacks need to take into account 'no spray' policies.

Impacts to agriculture also occur when lands are removed from agricultural production and remain fallow or crops are abandoned. While this type of impact generally occurs on the edge of urban development, it can also occur in the middle of an agricultural area. Fallow and abandoned farmland becomes habitat to invasive and noxious pests which may damage plants, lower

production, and cause the need to increase the use of pesticides and rodenticides on adjacent farmland. State law grants authority to the County Agricultural Commissioner to address these types of nuisances, but it ultimately is the responsibility of individual property owners to avoid impacting adjacent farmland.

#### **POLICY 1.9**

The County shall continue to protect agricultural resources by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance.

#### **IMPLEMENTATION MEASURES**

1. The County shall continue to implement the Right-to-Farm ordinance.  
***Responsible Departments: Tax Collector, Clerk Recorder, Planning, Planning Commission, Board of Supervisors***
2. The County shall utilize complaints related to agricultural activities as educational opportunities.  
***Responsible Departments: Agricultural Commissioner, Planning, Board of Supervisors***

#### **POLICY 1.10**

The County shall protect agricultural operations from conflicts with non-agricultural uses by requiring buffers between proposed non-agricultural uses and adjacent agricultural operations.

#### **IMPLEMENTATION MEASURES**

1. The County shall require buffers and setbacks for all discretionary projects introducing or expanding non-agricultural uses in or adjacent to an agricultural area consistent with the guidelines presented in Appendix "A".  
***Responsible Departments: Agricultural Commissioner, Planning, Planning Commission, Board of Supervisors***

#### **POLICY 1.11**

The County shall support state regulations requiring landowners to manage noxious weeds and pests on fallow or abandoned lands.

#### **IMPLEMENTATION MEASURE**

1. The Agricultural Commissioner shall enforce state regulations requiring landowners to manage noxious weeds and pests on fallow or abandoned lands.  
***Responsible Departments: Agricultural Commissioner, Board of Supervisors***

**OBJECTIVE NUMBER 1.4: Provide Housing for Farmworkers**

Efficient farm management requires a stable work force to provide labor when needed. To ensure the availability of that labor, adequate numbers of employees must be housed on both a temporary and a permanent basis. Farmworker housing issues involve the location, amount and type of housing for seasonal and year-round farm workers.

State and federal housing programs for farm workers in Stanislaus County are administered by the Stanislaus County Housing Authority, which is an independent public agency entirely separate from County government. Farmworker housing projects currently administered by the Housing Authority are located throughout the County. Other efforts to provide farmworker housing come mainly from individual farmers. The Stanislaus County Department of Environmental Resources is the local agency responsible for enforcing state regulations of farmworker housing.

The County appoints the Housing Authority Board, which is the agency's policy-making body, and otherwise assists the Housing Authority as outlined in a cooperative agreement. The Housing Element of the General Plan includes a commitment that the County shall continue to assist the Housing Authority in its administration of state and federal housing programs for farm workers.

The General Agriculture (A-2) zoning district allows, with use permit, farm labor camps and permanent housing for persons employed on a full-time basis in connection with any agricultural work or place where agricultural work is being performed. The County Zoning Ordinance also recognizes the use of manufactured housing (mobile homes) under a temporary permit when specific criteria can be met to substantiate the need to provide housing for a full-time employee. Manufactured housing (mobile homes) are preferred over standard housing because they can be moved off the property if circumstances change and the employees are no longer needed.

**POLICY 1.12**

To help provide a stable work force for agriculture, the County shall continue to facilitate efforts of individuals, private organizations and public agencies to provide safe and adequate housing for farm workers.

**IMPLEMENTATION MEASURES**

1. The County shall continue to implement the farm worker housing policies of the Housing Element of the General Plan. The County also shall facilitate the efforts of other public agencies, private organizations and individuals to provide safe and adequate housing for farm workers.  
**Responsible Departments: Planning, Board of Supervisors**
  
2. The Stanislaus County Department of Environmental Resources shall continue to enforce state regulations regarding farmworker housing.  
**Responsible Departments: Environmental Resources**
  
3. The County shall consider adoption of expedited permitting procedure for construction of temporary farmworker housing.  
**Responsible Departments: Environmental Resources, Planning, Planning Commission, Board of Supervisors**

**POLICY 1.13**

Temporary housing for full-time farm employees in connection with any agricultural work or place where agricultural work is being performed shall be supported.

**POLICY 1.14**

Permanent, new housing for seasonal farm workers preferably shall be located in areas supplied with public sewer and water services.

**POLICY 1.15**

Housing for year-round, full-time farm employees shall be permissible in addition to the number of dwellings normally allowed by the density standard.

**IMPLEMENTATION MEASURE**

1. The County shall continue to implement existing General Agriculture (A-2) zone provisions for farmworker housing consistent with policies 1.16 - 1.18 of the Agricultural Element.  
***Responsible Departments: Planning, Planning Commission, Board of Supervisors***

**OBJECTIVE NUMBER 1.5: Support Education and Technical Assistance**

Farmers and ranchers often lack the means to undertake the wide range of activities necessary to pursue new agricultural market opportunities and develop new products. Public educational institutions, including the University of California, California State University Stanislaus and Modesto Junior College all provide some form of technical assistance to agriculture. However, these public institutions can be better utilized to help agricultural groups and individuals conduct market analyses, identify direct marketing opportunities, promote exports, and coordinate other economic development activities in support of local agriculture.

Vocational agriculture programs provide education and hands-on experience for high school and MJC students in Stanislaus County. The 4-H and Future Farmers of America (FFA) programs also play an important role in agricultural education. 4-H programs are part of the U.C. Cooperative Extension, which receives County funding. FFA programs operate in conjunction with vocational agriculture programs in the public high schools and are not directly related to U.C. Cooperative Extension. However, U.C. Cooperative Extension works with vocational agriculture teachers and provides assistance to vocational agriculture programs, both at the high school and the junior college levels.

Several public agencies conduct agricultural research and provide educational services at the County level: the U.S.D.A. Natural Resource Conservation Center, the East and West Stanislaus Resource Conservation Districts, U.C. Cooperative Extension and the Stanislaus County Agricultural Commissioner's office. Three of these agencies are centrally located in the County Agricultural Center.

**POLICY 1.16**

Public education institutions shall be encouraged to provide more technical assistance related to agricultural economic development in Stanislaus County.

**POLICY 1.17**

The County shall continue to encourage vocational agriculture programs in local high schools and at Modesto Junior College.

**POLICY 1.18**

Public agencies providing agricultural services shall be encouraged to continue agricultural research and education.

**POLICY 1.19**

The County shall continue to encourage 4-H and FFA programs for local youth.

**IMPLEMENTATION MEASURES**

1. Local 4-H programs will be encouraged by continued support of U.C. Cooperative Extension.  
**Responsible Departments: U.C. Cooperative Extension, Agricultural Advisory Board, Board of Supervisors**
2. The County will continue to support the County fair, which involves vocational agriculture, FFA and 4-H programs.  
**Responsible Departments: U.C. Cooperative Extension, Agricultural Advisory Board, Board of Supervisors**

**POLICY 1.20**

The County shall continue to support the Agricultural Center where offices of public agencies providing agricultural services are centrally located.

**IMPLEMENTATION MEASURE**

1. The County will continue to support the County Agricultural Center that houses the public agencies directly related to agriculture, including the U.C. Cooperative Extension, the Agricultural Commissioner, the U.S. Department of Agriculture and the California Department of Food and Agriculture.  
**Responsible Departments: U.C. Cooperative Extension, Agricultural Commissioner, Board of Supervisors**



**OBJECTIVE NUMBER 1.6: Protect Food Safety**

~~The lack of consumer confidence in food can be costly to the agricultural community.~~ **A safe food supply is a major concern to all consumers and, as such, is critical to the economic health of our agricultural community. Food borne pathogen outbreaks,** ~~the use of chemicals in growing and storing crops, the use of antibiotics and hormones in raising poultry and livestock, and the use of radiation to prolong the shelf-life of our food are types of agricultural practices~~ issues that worry consumers who are concerned about food safety and its long-term impacts on their health.

**Food borne pathogen outbreaks related to agricultural production practices and operations, whether confirmed or alleged through media sources, can be extremely costly and greatly impact agriculture. The Food Safety Modernization Act (FSMA) authorizes the United States Department of Agriculture (USDA) to develop more extensive regulations and guidelines designed to prevent food borne illness through recordkeeping and trace back requirements of agricultural commodities. The Agricultural Commissioner who is responsible for promoting and protecting the agricultural industry will likely be the local arm of government responsible to assist in implementing provisions of the FSMA. Such a program will be designed to quickly address reports of food borne pathogen outbreaks and to diminish impacts to the agricultural industry and the community in general.**

The public is also concerned about the impact of agricultural chemicals on the environment. Air, soil and water quality problems can result from the unsafe application and disposal of agricultural chemicals. A viable agricultural industry requires a sustainable regulatory framework promoting economic viability and environmental safety.

The primary responsibility for regulating and monitoring the sale and use of pesticides rests with the California Department of Pesticide Regulation, which classifies and registers pesticides, and the Stanislaus County Agricultural Commissioner, who issues permits to possess and use restricted pesticides. In general, no restricted **pesticide** material can be possessed or used in any way until the applicator has obtained a permit from the Agricultural Commissioner. The Agricultural Commissioner also operates programs for the inspection of fruits, vegetables and eggs to ensure quality produce; the inspection of nurseries and seed crops to guard against diseases and inferior plants; pest exclusion to prevent crop-destroying pests from becoming established in California; and pest detection to find pests at the lowest population and in the smallest area possible in order to minimize the effects and costs of an eradication program.

The U.C. Cooperative Extension conducts educational and applied-research programs in integrated pest management and all other aspects of pest control.

**POLICY 1.21**

The County shall continue to work with local, state and federal agencies to ensure the safety of food produced in Stanislaus County and to maintain a local regulatory framework promoting environmental safety while ensuring the economic viability of agriculture.

## IMPLEMENTATION MEASURES

1. The Agricultural Commissioner will continue to work with government agencies and farmers to ensure the safe use of agricultural chemicals.  
**Responsible Departments: Agricultural Commissioner, U.C. Cooperative Extension**
  2. **As regulations are established, the Agricultural Commissioner will work with state and federal agencies and the farming community in the implementation of a food safety program to include a record keeping and trace back system to ensure minimal impacts related to food borne pathogens and associated outbreaks.**  
**Responsible Departments: Agricultural Commissioner**
  3. **The County shall support the rights of growers to utilize the widest range of newest available technologies.**  
**Responsible Departments: Agricultural Commissioner, U.C. Cooperative Extension, Board of Supervisors**
- 42.**—The U.C. Cooperative Extension will continue to conduct educational and applied-research programs to promote food safety and agricultural practices that are environmentally sound.  
**Responsible Departments: Agricultural Commissioner, U.C. Cooperative Extension**

### **OBJECTIVE NUMBER 1.7: Encourage Regional Coordination in the Central Valley**

The Central Valley has long been one of the premier agricultural regions in the world. Yet the Central Valley's population is growing rapidly, resulting in far-reaching demographic, social and economic changes. Some of the most obvious changes include crowded highways, polluted air, and homes and shopping centers sprouting from what used to be farmland. These types of regional impacts will likely have cumulative effects on agriculture, exerting a powerful influence over its future viability in the Central Valley.

One way to address regional impacts of growth and help ensure the continued success of agriculture in the Central Valley is to encourage regional coordination among the various counties and cities in the Central Valley. Currently there are nine councils of government in the Central Valley, including Stanislaus Council of Governments (StanCOG). These groups provide a forum for communication between the County government and municipalities within the County. However, there is no agency that coordinates planning and development activities of counties and cities for the entire Central Valley.

### **POLICY 1.22**

The County shall encourage regional coordination of planning and development activities for the entire Central Valley.

### **IMPLEMENTATION MEASURE**

1. The County shall participate in regional efforts to address long-range planning, infrastructure, conservation and economic development issues facing the Central Valley.  
**Responsible Departments: Board of Supervisors**

## GOAL TWO

Conserve our agricultural lands for agricultural uses.

Agricultural land is a finite, irreplaceable resource. Once agricultural land has been taken out of production and paved over to provide streets for residential subdivisions and parking lots for shopping centers, it is not likely to be farmed again. The urbanization of productive agricultural land means the permanent loss of an irreplaceable resource.

With population in the Central Valley projected to increase dramatically, Stanislaus County faces greater pressure to convert agricultural lands to non-farm residential, commercial and industrial uses. The policies presented in Goal Two of this document are intended to provide a practical, effective framework for land-use decisions regarding agricultural lands, with the overall goal of conserving agricultural lands for agricultural uses.

While not all agricultural land in Stanislaus County can be conserved, it is possible to protect agricultural areas through a combination of agricultural zoning and policies that clearly direct growth to cities and unincorporated communities with appropriate services to foster a sustainable community. By balancing the need to create housing and job opportunities for an expanding population with the need to protect our agricultural lands, we will help ensure the continued success of local agriculture.

Unlike urbanization, the parcelization of farmland has the potential to result in a gradual loss of farmland associated with the creation of parcels for 'residential purposes' and not 'agricultural purposes'. Parcels created in the agricultural area for 'residential purpose' are commonly referred to as 'ranchette' parcels. Ranchettes are characterized as rural homesites valued primarily for their residential development potential. What is classified as a ranchette size will vary based on soil type, terrain, irrigation water availability and other such factors. The land costs associated with ranchettes are driven by residential potential which cannot be supported by the agricultural income potential of the land. As the use of land transitions from production agriculture to ranchettes, landowner priorities in the areas shift from the protection of agricultural rights to the protection of residential rights.

In recognition of the legitimate agricultural reasons for parcelization of farmland there are options available to insure ranchettes are not inadvertently created. These options include maintaining minimum parcel size requirements suitable for production agriculture, restricting use of farmland to production agriculture, and establishing 'no build' provisions for the development of dwellings on newly created parcels which are not used for production agriculture or capable of production agriculture. These options may also be applied to lot line adjustments of farmland, which also have the potential to result in the creation of ranchette parcels.

### **OBJECTIVE NUMBER 2.1: Continued Participation in the Williamson Act**

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is a tax relief measure for owners of farmland. The Williamson Act permits a landowner, whose land is used for farming, to sign a contract with the County guaranteeing that the land will continue to remain in farming for a period of at least ten years. In return for this guarantee, the County assesses taxes

based on the agricultural value of the land rather than the market value. Generally, this means taxes for a farmer are reduced, sometimes greatly. Participation in the Williamson Act, has been a fundamental part of Stanislaus County's agricultural land conservation program.

Local jurisdictions implement the Williamson Act by adoption of agricultural preserves and rules governing the administration of the agricultural preserves. Adopted rules must be applied uniformly throughout the preserves and, as such, are commonly termed uniform rules. Stanislaus County has adopted the A-2 (General Agricultural) zoning district as its agricultural preserve. While the Williamson Act itself does not establish permitted uses within an agricultural preserve, permitted uses must be consistent with Principles of Compatibility outlined within the Williamson Act. The Williamson Act does establish presumed minimum parcel sizes for lands enrolled under contract. Minimum parcel sizes apply to both the creation of new parcels and parcels involved in a lot line adjustment.

The local governing jurisdiction has the ability to establish compatible uses, alternative minimum parcel sizes, and criteria for lot line adjustment based on the individualized needs of the community, provided the overall purpose and minimum standards of the Act are maintained.

Generally, the Williamson Act enjoys widespread support among landowners and government officials. The Williamson Act has helped to stabilize farm income and keep many operators in business by limiting the tax burden on contracted parcels. The Open Space Subvention Program, which is the companion to the Williamson Act, requires the State to partially reimburse local governments for forgone property tax revenues.

Stanislaus County has voluntarily participated in the Williamson Act program since 1970. Although the County's participation rate is one of the highest in the state, the percentage of land enrolled under contract has declined by four percent since the height of enrollment in 1981-82. The decline is primarily attributed to lands annexed by cities and contracts which have expired as result of notices of nonrenewal filed by property owners. Notices of nonrenewal are common in areas adjacent to city boundaries and unincorporated communities where development pressures are increasing. The passage of state legislation in 2003 establishing procedures and penalties for material breach of contracts have resulted in an increase of notices of nonrenewal throughout the entire A-2 zoning district.

Despite the trend of increasing notices of nonrenewal, cancellation requests in Stanislaus County have remained low. Generally, the Williamson Act continues to be an effective tool to help keep agricultural land in agricultural use. One reason for the increase in notices of nonrenewal may be attributed to the significant number of undersized parcels currently enrolled under contract. Since the County started participating in the Williamson Act, there have been periods when no minimum parcels size requirements existed for enrollment under contract. Currently, a minimum of 10-acres is required for enrollment under contract. While these undersized parcels may not benefit, they do face restrictions. The County has taken action to notify owners of undersized parcels of the process of nonrenewal, but few have taken advantage of the process. Increases in notices of nonrenewal in recent years have been the result of changes in State legislation.

### **POLICY 2.1**

The County shall continue to provide property tax relief to agricultural landowners by participating in the Williamson Act.

#### **IMPLEMENTATION MEASURE**

1. The County shall continue to participate in the Williamson Act, thereby providing property tax relief to farmers and ranchers who volunteer to keep their land in agricultural use.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors.**

### **POLICY 2.2**

The County shall support reasonable measures to strengthen the Williamson Act, making it a more effective tool for the protection of agricultural land.

#### **IMPLEMENTATION MEASURES**

1. The County shall encourage the State Legislature to increase Williamson Act subvention payments to local governments based on cost-of-living increases and/or a restructuring of the Williamson Act subventions schedule.  
**Responsible Departments: Chief Executives Office, Board of Supervisors.**
2. The County will supplement the Williamson Act with other conservation tools in a comprehensive program for the protection of agricultural land.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**

### **POLICY 2.3**

The County shall ensure all lands enrolled in the Williamson Act are devoted to agricultural and compatible uses supportive of the long-term conservation of agricultural land.

#### **IMPLEMENTATION MEASURE**

1. The County shall initiate the filing of notices of nonrenewal on any parcel being used, or of a size, inconsistent with adopted uniform rules and applicable state regulations.  
**Responsible Departments: Assessors Office, Planning, Board of Supervisors**

#### **OBJECTIVE NUMBER 2.2: Discourage urbanization and the conversion of agricultural land in unincorporated areas of the County**

In Stanislaus County, urbanization and farmland conversion are like two sides of the same coin. As urban areas expand to accommodate a growing population, surrounding farmland is converted to residential subdivisions, shopping centers and industrial parks.

Like many other farming areas, the towns in Stanislaus County began as agricultural service centers and located where the farms were, on the valley floor. As these towns have expanded beyond their original functions, they have expanded outward onto our richest, most productive soils. Today,

population growth continues to push urban development onto farmland once in agricultural production. If the trend continues outward onto productive agricultural land to accommodate population growth, the resource base of our biggest industry will be seriously threatened.

Remote development, or development that takes place away from existing cities or urban centers, has traditionally been discouraged by planners and County officials in favor of the compact expansion of already existing urban centers. Existing County policy regarding remote development is stated in Policy Ten of the Land Use Element: "New areas for urban development (as opposed to expansion of existing areas) shall be limited to less productive agricultural areas." In theory remote development offers a better alternative to the unlimited expansion of established cities and towns into our most productive agricultural areas. However, the benefits of remote development are diminished by the impact to surrounding agricultural uses and the introduction of urban infrastructure in an agricultural area.

In defining the County's most productive agricultural areas, it is important to recognize that soil types alone should not be the determining factor. With modern management techniques, almost any soil type in Stanislaus County can be extremely productive. At the same time, many of our most valuable agricultural commodities are produced on lesser quality soils. For example, milk is the County's top-grossing commodity and yet most of the dairy farms in Stanislaus County are located in areas that might be considered less productive agricultural lands, based solely on soil capability. Although soil types should be considered, the designation of "most productive agricultural areas" also should be based on existing uses and their contributions to the agricultural sector of our economy.

Conversion of agricultural land also occurs when nonagricultural uses are introduced into agricultural areas and when agricultural land is parceled or adjusted into sizes too small to sustain an agriculturally viable independent farming operation. The County's Agricultural land use designation and corresponding A-2 (General Agriculture) zoning recognize ranchette areas with minimum lot size requirements of 3, 5, 10, and 20 acres. Ranchette areas have been identified based on significant existing parcelization of property, poor soil, location, and other factors which limit the agricultural productivity of the area. The inclusion of ranchette minimum parcel sizes in the A-2 zoning district creates the potential for future expansion of ranchette areas without the need to amend the lands Agricultural land use designation.

#### **POLICY 2.4**

To reduce development pressures on agricultural lands, higher density development and in-filling shall be encouraged.

#### **IMPLEMENTATION MEASURE**

1. The County shall encourage higher density development and in-filling of already-existing urban areas.

***Responsible Departments: Planning, Board of Supervisors***

#### **POLICY 2.5**

To the greatest extent possible, development shall be directed away from the County's most productive agricultural areas.

## IMPLEMENTATION MEASURE

1. Until the term "Most Productive Agricultural Areas" is defined on a countywide basis, the term will be determined on a case-by-case basis when a proposal is made for the conversion of agricultural land. Factors to be considered include but are not limited to soil types and potential for agricultural production; the availability of irrigation water; ownership and parcelization patterns; uniqueness and flexibility of use; the existence of Williamson Act contracts; existing uses and their contributions to the agricultural sector of the local economy. As an example, some grazing lands, dairy regions and poultry-producing areas as well as farmlands can be considered "Most Productive Agricultural Areas." Failure to farm specific parcels will not eliminate them from being considered "Most Productive Agricultural Areas." Areas considered to be "Most Productive Agricultural Areas" will not include any land within LAFCO-approved Spheres of Influence of cities or community services districts and sanitary districts serving unincorporated communities.  
**Responsible Departments: Agricultural Commissioner, Planning, Planning Commission, Board of Supervisors**
2. Uses on agricultural land located outside a LAFCO-adopted Sphere of Influence shall be primarily devoted to agricultural and compatible uses supportive of the long-term conservation of agricultural land. Agriculturally - related uses needed to support production agriculture and uses which by their unique nature are not compatible with urban uses, may be allowed on agricultural land provided they do not conflict with the agricultural use of the area.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
3. **The County shall encourage the development of alternative energy sources on lands located outside "Most Productive Agricultural Areas".**  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**

## POLICY 2.6

Agricultural lands restricted to agricultural use shall not be assessed to pay for infrastructure needed to accommodate urban development.

## IMPLEMENTATION MEASURE

1. The County shall continue to exempt agricultural buildings designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products from payment of Public Facility Fees. Exempt structures shall not be a place of human habitation or a place of employment where agricultural products are processed, treated or packaged, nor shall it be a place used by the public.  
**Responsible Departments: Board of Supervisors**

## POLICY 2.7

Proposed amendments to the General Plan Diagram (map) that would allow the conversion of agricultural land to non-agricultural uses shall be approved only if they are consistent with the County's conversion criteria.



## IMPLEMENTATION MEASURE

1. Procedures for processing General Plan amendments shall incorporate the following requirements for evaluating proposed amendments to the General Plan Diagram (map) that would allow the conversion of agricultural land to urban uses:

Conversion Consequences. The direct and indirect effects, as well as the cumulative effects, of the proposed conversion of agricultural land shall be fully evaluated.

Conversion Considerations. In evaluating the consequences of a proposed amendment, the following factors shall be considered: plan designation; soil type; adjacent uses; proposed method of sewage treatment; availability of water, transportation, public utilities, fire and police protection, and other public services; proximity to existing airports and airstrips; impacts on air and water quality, wildlife habitat, endangered species and sensitive lands; and any other factors that may aid the evaluation process.

Conversion Criteria. Proposed amendments to the General Plan Diagram (map) that would allow the conversion of agricultural land to urban uses shall be approved only if the Board of Supervisors makes the following findings:

- A. Overall, the proposal is consistent with the goals and policies of the General Plan.
- B. There is evidence on the record to show a demonstrated need for the proposed project based on population projections, past growth rates and other pertinent data.
- C. No feasible alternative site exists in areas already designated for the proposed uses.
- D. Approval of the proposal will not constitute a part of, or encourage, piecemeal conversion of a larger agricultural area to non-agricultural uses, and will not be growth-inducing (as used in the California Environmental Quality Act).
- E. The proposed project is designed to minimize conflict and will not interfere with agricultural operations on surrounding agricultural lands or adversely affect agricultural water supplies.
- F. Adequate and necessary public services and facilities are available or will be made available as a result of the development.
- G. The design of the proposed project has incorporated all reasonable measures, as determined during the CEQA review process, to mitigate impacts to agricultural lands, fish and wildlife resources, air quality, water quality and quantity, or other natural resources.

***Responsible Departments: Planning, Planning Commission, Board of Supervisors***

## **POLICY 2.8**

In order to further the conservation of agricultural land, the subdivision of agricultural lands shall not result in the creation of parcels for 'residential purposes'. Any residential development on agriculturally zoned land shall be incidental and accessory to the agricultural use of the land.

### **IMPLEMENTATION MEASURE**

1. The subdivision of agricultural land consisting of unirrigated farmland, unirrigated grazing land, or land enrolled under a Williamson Act contract, into parcels of less than 160-acres in size shall be allowed provided a "no build" restriction on the construction of any residential development on newly created parcel(s) is observed until one or both of the following criteria is met:
  - 90% or more of the parcel shall be in production agriculture use with its own on-site irrigation infrastructure and water rights to independently irrigate. For land which is not irrigated by surface water, on-site irrigation infrastructure may include a self-contained drip or sprinkler irrigation system. Shared off-site infrastructure for drip or sprinkler irrigation systems, such as well pumps and filters, may be allowed provided recorded long-term maintenance agreements and irrevocable access easements to the infrastructure are in place.
  - Use of the parcel includes a confined animal facility (such as a commercial dairy, cattle feedlot, or poultry operation) or a commercial aquaculture operation.

***Responsible Departments: Planning, Planning Commission, Board of Supervisors.***

## **POLICY 2.9**

Lot-line adjustments involving agricultural land shall be primarily created and properly designed for agricultural purposes without materially decreasing the agricultural use of the project site.

### **IMPLEMENTATION MEASURE**

1. In terms of minimum parcel size and residential building intensity, a greater number of nonconforming parcels shall not be created by lot-line adjustment. The following criteria shall apply when nonconforming parcels are involved in a lot-line adjustment:
  - Nonconforming parcels greater than 10-acres in size shall not be adjusted to a size smaller than 10-acres, unless the adjustment is needed to address a building site area or correct for a physical improvement which is found to encroach upon a property line. In no case shall a parcel enrolled in the Williamson Act be reduced to a size smaller than 10-acres.
  - Nonconforming parcels less than 10-acres in size may be adjusted to a larger size, 10 acres or greater in size if enrolled in the Williamson Act, or reduced, if not enrolled in the Williamson Act, as needed to address a building site area or correct for a physical improvement which is found to encroach upon a property line.

***Responsible Departments: Planning, Planning Commission, Board of Supervisors.***

## **POLICY 2.10**

Minimum parcel sizes allowed for lands designated Agriculture shall not promote the expansion of existing, or creation of new, ranchette areas.

### **IMPLEMENTATION MEASURES**

1. Minimum parcel sizes of 40- or 160- acres shall be appropriate for lands designated Agriculture.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
2. In recognition of 3-, 5-, 10, and 20- acre minimum parcel sizes being appropriate for ranchette areas, no additional land designated as Agriculture shall be rezoned to A-2-3, 5, 10, or 20.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
3. The County shall evaluate and modify as needed, the remote development policy of the Land Use element as part of a comprehensive General Plan update to insure such development does not impact surrounding agricultural uses or introduce urban infrastructure into an agricultural area.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**

### **OBJECTIVE NUMBER 2.3: Expansion of Cities and Unincorporated Communities**

The Stanislaus Local Agency Formation Commission (LAFCO) is the local agency responsible for coordinating logical and timely changes in local governmental boundaries, including Spheres of Influence (SOI). The spheres of influence delineate the probable ultimate boundaries and service areas of the cities, and are intended to promote the efficient provision of urban services, including sewer, water, police protection and fire protection. Similarly, community services districts and sanitary districts serving unincorporated communities also have adopted spheres of influence that indicate their probable ultimate boundaries. LAFCO's efforts are directed to seeing that services are provided efficiently and economically while agricultural and open-space lands are protected.

With the approval of LAFCO, spheres of influence can be expanded to accommodate growth. The question of whether or not proposed expansions should be allowed is decided solely by LAFCO. LAFCO is an independent agency created by state law. In Stanislaus County the LAFCO is composed of two county supervisors; two city council representatives; and one public member. As an independent agency, LAFCO is not required to adhere to county policies, but state law requires LAFCO to consider conformity with all applicable general plans in the review of all proposals. As such, this agricultural element, and the county general plan as a whole, can have an effect on the actions of LAFCO.

In recognition that unincorporated land within the established spheres of influence will be urbanized, these lands generally are designated Agriculture and zoned General Agriculture (A-2) until annexed by the city or special district.

Existing policy in the Land Use Element delineates the County's role in managing the development of agriculturally zoned lands within city spheres of influence. Reflecting agreements between the County and all nine cities, these policies provide that the County shall refer all

development proposals to the appropriate city to determine whether or not the proposal should be approved. Development, other than agricultural uses and churches, cannot be approved by the County unless written communication is received from the city memorializing their approval.

The Land Use Element also includes policies regarding the development of unincorporated communities and the expansion of urban boundaries (Policies Six and Thirteen). The County is actively encouraging the upgrading of unincorporated communities through the redevelopment and community development block grant programs, which provide significant tools for improving infrastructure and enhancing the quality of life in these areas.

## **POLICY 2.11**

The County recognizes the desire of cities and unincorporated communities to grow and prosper and shall not oppose reasonable requests consistent with city and county agreements to expand, provided the resulting growth minimizes impacts to adjacent agricultural land.

### **IMPLEMENTATION MEASURES**

1. The County shall continue to urge LAFCO to strengthen its policies, standards and procedures for evaluating proposed annexations of agricultural land and proposed expansions of service districts or spheres of influence onto agricultural land to insure resulting urban growth minimizes impacts to adjacent agricultural lands.  
**Responsible Departments: Agricultural Commissioner, Planning, Planning Commission, Board of Supervisors**
2. The County shall actively review LAFCO referrals to insure proposed projects are consistent with County General Plan policies.  
**Responsible Departments: Agricultural Commissioner, Planning, Board of Supervisors**

## **POLICY 2.12**

In order to minimize impacts to adjacent agricultural land, the County shall encourage LAFCO to use physical features such as roads and irrigation laterals as the boundaries for sphere of influence expansions.

### **IMPLEMENTATION MEASURE**

1. The County shall encourage LAFCO to consider buffer guidelines adopted by the County when cities or community services districts and sanitary districts serving unincorporated communities propose to expand their boundaries.  
**Responsible Departments: Agricultural Commissioner, Planning, Planning Commission, Board of Supervisors**

## **POLICY 2.13**

In recognition that unincorporated land within spheres of influence of cities or community services districts and sanitary districts serving unincorporated communities ultimately will be urbanized, the County shall cooperate with cities and unincorporated communities in managing development in sphere of influence areas.

## **IMPLEMENTATION MEASURES**

1. The County will continue to implement its policies and agreements with cities regarding the development of unincorporated lands within spheres of influence.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
2. The County will continue to implement policies in the Land Use Element regarding the development of unincorporated communities and expansion of their urban, or service district, boundaries.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**

### **OBJECTIVE NUMBER 2.4: Assessing and mitigating Impacts of farmland conversion**

The conversion of agricultural land to non-agricultural uses has far-reaching impacts on the land, water and air resources that support our biggest industry. For example, taking out an almond orchard to accommodate urban development may involve paving over groundwater recharge areas, which will have a long-term effect on groundwater resources. Similarly, new roads providing access to the development may increase traffic congestion, resulting in a cumulative impact on air quality.

The California Environmental Quality Act (CEQA) requires the County to consider the environmental consequences of development-related projects and to ensure that adverse environmental impacts are avoided or minimized as much as possible. If the County determines in its Initial Study that a project could have a significant adverse environmental effect, the County must require preparation of an Environmental Impact Report (EIR) to fully assess potential impacts, propose

ways to minimize or mitigate those impacts, and consider alternatives to the proposed project. The County may approve a project only if mitigation measures are adopted whenever feasible to avoid or reduce all significant environmental impacts or findings of 'overriding considerations' are adopted.

Under CEQA Guidelines, the County has some discretion in determining whether the conversion of agricultural land will have a significant adverse effect on the environment. A project will normally have a significant effect on the environment if it will convert prime agricultural land to non-agricultural use or impair the productivity of prime agricultural land. "Prime agricultural land" is not defined under CEQA. Several attempts have been made in years past to allow or require local governments to establish a threshold of agricultural land loss for the purpose of determining a significant effect on the environment and thereby necessitating an EIR. However, instead of using an arbitrary threshold such as 100 acres to trigger an EIR, the County prefers to evaluate each project on a case-by-case basis. When the County determines that under the specific circumstances of the proposed project the conversion of agricultural land could have a significant effect, the County requires preparation of an EIR.

The analysis of the impacts of farmland conversion are often limited to a discussion of the prime soils that the project would make unavailable for farming, but rarely identifies the impacts on surrounding farming operations. Neither CEQA nor the State CEQA Guidelines contain detailed

procedures or guidance concerning when and how agencies should address farmland conversion impacts. The County may amend its own CEQA Guidelines to include local guidelines for assessing the impacts of farmland conversion.

A common strategy for mitigating the loss of farmland is to require the permanent protection of farmland based on an identified ratio to the amount of farmland converted. A viable option for permanent protection is purchase of an agricultural conservation easement on farmland. Agricultural conservation easements generally restrict the non-agricultural use of property in perpetuity and are overseen by a trust established with a goal of promoting farmland conservation. The purchase of agricultural conservation easements is typically accomplished in one of two methods: 1) the developer works directly with a trust to purchase the required conservation easement prior to development or 2) the developer pays a fee to be used by a trust to purchase an agricultural conservation easement at a later date. While payment of a fee is typically easier for the developer, it is not always a guaranteed method to attaining the desired results. Fees paid at current cost may not keep pace with the escalating land costs and trusts must recover the cost of administering fees until a conservation easement is purchased. At the same time, a landowner wanting to sell an agricultural conservation easement may not be available at the time a development project is approved. A mitigation program focused on agricultural conservation easements must maintain a balance between the practical acquisition and actual cost of agricultural conservation easements.

To be effective, lands placed under easement must be strategically located to insure the viability of the surrounding farmland is protected. An isolated island of agricultural land surrounded by development or agriculturally non-viable parcels has little positive impact on efforts to protect farmland.

#### **POLICY 2.14**

When the County determines that the proposed conversion of agricultural land to non-agricultural uses could have a significant effect on the environment, the County shall fully evaluate on a project-specific basis the direct and indirect effects, as well as the cumulative effects of the conversion.

#### **IMPLEMENTATION MEASURES**

1. The County will continue to evaluate each project on a case-by-case basis to determine whether the conversion of agricultural land will have a significant adverse effect on the environment.  
**Responsible Departments: Agricultural Commissioner, UC Cooperative Extension, Planning, Planning Commission, Board of Supervisors.**
2. When it determines that the conversion of agricultural land will have a significant adverse effect on the environment, the County will continue to require preparation of an EIR to fully assess the impacts of the conversion, propose mitigation measures, and consider alternatives to the proposed project.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors.**

## **POLICY 2.15**

In order to mitigate the conversion of agricultural land resulting from a discretionary project requiring a General Plan or Community Plan amendment from “~~1~~-Agriculture~~2~~” to a residential land use designation, the County shall require the replacement of agricultural land at a 1:1 ratio with agricultural land of equal quality located in Stanislaus County.

### **IMPLEMENTATION MEASURE**

1. Mitigation shall be applied consistent with the Farmland Mitigation Program Guidelines presented in Appendix “B”.

***Responsible Departments: Agricultural Commissioner, UC Cooperative Extension, Planning, Planning Commission, Board of Supervisors.***

## **POLICY 2.16**

The County shall participate in local efforts to identify strategic locations for the purchase of agricultural conservation easements by land trusts and shall promote the long-term viability of farmland in areas surrounding existing farmland held under conservation easements.

### **IMPLEMENTATION MEASURE**

1. To facilitate the mitigation of the impacts of farmland conversion, the County may make information available on private, non-profit agricultural land trusts, may serve on committees that are formed for the purpose of establishing an agricultural land trust, and may coordinate County mitigation programs with the land trust once it is established.

***Responsible Departments: Agricultural Commissioner, UC Cooperative Extension, Planning, Board of Supervisors.***

## **POLICY 2.17**

The County shall work cooperatively with the nine cities within the County and to encourage them to adopt agricultural conservation policies or ordinances which are consistent with County policies or ordinances in order to undertake an integrated, comprehensive Countywide approach to farmland conservation. It is the ultimate goal of the County to have all nine cities participate in or adopt an agricultural mitigation ordinance that is the same as or substantially similar.

### **IMPLEMENTATION MEASURE**

1. The County shall facilitate efforts to have all nine cities participate in or adopt an agricultural mitigation ordinance that is the same as or substantially similar to adopted County ordinances addressing agricultural mitigation.

## **OBJECTIVE NUMBER 2.5: Limit the Impact of Antiquated Subdivisions**

One of the biggest threats to Stanislaus County's agricultural economy is the potential creation of hundreds of ranchettes in antiquated subdivisions.

Antiquated subdivisions are subdivisions created in the early part of the 1900's and exist on paper but have never been developed or sold in lots. Numerous antiquated subdivisions are located



throughout Stanislaus County, involving more than 3,000 lots ranging in size from 3,250 square feet to 20 acres or more. If these lots were sold and developed, the loss of agricultural land coupled with the impact on surrounding agricultural operations could be devastating to the long-term viability of the agricultural economy.

Created prior to enactment of the State Subdivision Map Act and the California Environmental Quality Act, antiquated subdivisions were created without any kind of formal review to evaluate their economic and environmental consequences to the County. In addition to having adverse impacts on agriculture, antiquated subdivisions pose a variety of environmental threats including groundwater contamination from the concentration of on-site septic systems and the generation of dust and auto emissions from increased traffic on unimproved access roads. The County's ability to provide emergency services such as fire protection, sheriff and ambulance services also could be adversely affected. Similarly, potential impacts of antiquated subdivisions on schools, parks and recreation have never been fully evaluated.

In 2000 the Stanislaus County Board of Supervisors amended the County Zoning Ordinance to address antiquated subdivisions. The amendment addresses antiquated subdivisions in the General Agriculture (A-2) zoning district by limiting the ability to place a dwelling on parcels of less than 20-acres in size without approval of a discretionary permit. The ordinance is based on the need to find the dwelling will be consistent with the County's General Plan, will not likely create a concentration of residential uses in the vicinity or induce other similarly situated parcels to become developed with single-family dwellings, and will not be substantially detrimental to or in conflict with agricultural uses of other property in the vicinity.

#### **POLICY 2.18**

Construction of a dwelling on an antiquated subdivision parcel shall only be allowed when such development does not create a concentration of residential uses or conflict with agricultural uses of other property in the vicinity.

#### **IMPLEMENTATION MEASURE**

1. The County shall continue to implement existing zoning ordinance provisions addressing antiquated subdivisions.

***Responsible Departments: Planning, Planning Commission, Board of Supervisors***

**GOAL THREE**

Protect the natural resources that sustain our agricultural industry.

Agriculture depends directly on the land, air, water and soil resources to sustain its productivity. The success of agriculture in Stanislaus County can be largely attributed to the availability of these resources for the production of a wide variety of products.

The continued availability of soil, high quality water and clean air cannot be taken for granted. In the process of urbanization to accommodate a booming population, Stanislaus County is losing farmlands to urban development by cities. At the same time, there is increasing competition between agriculture and urban uses for limited water resources. Ultimately these problems threaten the County's agricultural economy and our ability to help feed the nation.

Urbanization and the conversion of agricultural land are addressed under Goal Two, which focuses primarily on land-use issues regarding our agricultural lands. Other resource problems such as air quality, water quality and supply, and soil quality are addressed in the following section of this document. The policies presented under goal three are intended to ensure the long-term protection of the natural resources that sustain our agricultural industry.

**OBJECTIVE NUMBER 3.1: Air Quality**

Air quality in the San Joaquin Valley is monitored and standards are enforced by the California Air Resources Board and the San Joaquin Valley Air Pollution Control District, which is composed of the eight counties in the San Joaquin Valley air basin. The District was formed in recognition of the fact that air pollution is not limited by County lines--it is a regional problem affecting the entire valley. The lack of consistent standards and enforcement from one County to another makes it difficult to effectively address the cumulative impacts of pollution.

The Conservation/Open Space and Circulation Elements of the General Plan include policies and implementation measures to improve air quality by promoting communication, cooperation and coordination among agencies involved in air quality programs; working to accurately determine and mitigating air quality impacts of proposed projects; to ensure that circulation systems shall be designed and maintained to minimize traffic congestion and air pollution; and to support efforts to increase public awareness of air quality problems and solutions.

**POLICY 3.1**

The County shall continue to coordinate with the San Joaquin Valley Air Pollution Control District.

**IMPLEMENTATION MEASURE**

1. The County shall continue to refer development proposals to the San Joaquin Valley Air Pollution Control District for their review and analysis of impacts on air quality.

### **POLICY 3.2**

The County shall assist the San Joaquin Valley Air Pollution Control District in implementation of adopted plans and regulations.

#### **IMPLEMENTATION MEASURE**

1. The County shall require development proposals to incorporate all applicable air quality regulations and, where required, to include reasonable mitigation measures.  
***Responsible Departments: Planning, Planning Commission, Board of Supervisors***

### **POLICY 3.3**

The County shall encourage the development and use of improved agricultural practices that improve air quality and are economically feasible.

#### **IMPLEMENTATION MEASURE**

1. The County shall encourage and support the development and use of improved agricultural practices aimed at reducing the production of fine particles and other sources of air pollution.  
***Responsible Departments: Agricultural Commissioner, U.C. Cooperative Extension, Board of Supervisors***

### **OBJECTIVE NUMBER 3.2: Water Resources**

Water is the lifeblood of agriculture in Stanislaus County. To supplement an average rainfall of just 12 inches per year, local agriculture relies on a network of irrigation water delivery systems to sustain its broad diversity of valuable crops.

Compared to many other areas of the arid Central Valley, Stanislaus County has abundant water resources, at least in times of normal rainfall. The availability of high-quality, low-cost irrigation water traditionally has given local agriculture a competitive edge and has been largely responsible for its success. The main sources of irrigation water are the Stanislaus, Tuolumne and San Joaquin River watersheds, all of which originate in the Sierra Nevada Mountains. Groundwater is used to supplement irrigation supplies, and is the major source of domestic and industrial water.

The quality of groundwater is determined by the geological formations through which it filters and thereby cannot be controlled. Groundwater recharge occurs by water conducting through the gravels of major streams and rivers, seepage from reservoirs, irrigations and rainfall of well drained alluvial soils in the valley portions of the County. Decreasing groundwater quality in areas of the county is having adverse effects on domestic water suppliers, as well as the agricultural lands. As groundwater becomes unavailable for domestic use, other sources have to be found. As a result, urban and agricultural users are becoming more competitive for water supplies.

Conservation is the most cost-effective way to ensure adequate water supplies for all residents of Stanislaus County. Local farmers long have practiced conservation methods, and their ability to survive dry years is indicative of their success. Research is continually improving agricultural technology, and water-saving innovations are continually being adapted by local growers.

Domestic and industrial users also need to be informed about the need for conservation and methods of lowering their water requirements. All types of water sources in the County are increasingly interdependent. The availability of irrigation water is affected by the use of water by city-dwellers and businesses; the availability of drinking water and industrial water is affected by agricultural practices.

#### **POLICY 3.4**

The County shall encourage the conservation of water for both agricultural, **rural domestic**, and urban uses.

#### **IMPLEMENTATION MEASURES**

1. The County shall encourage water conservation by farmers by providing information on irrigation methods and best management practices and coordinating with conservation efforts of the Farm Bureau, Resource Conservation Districts, Natural Resource Conservation Service, and irrigation districts.  
**Responsible Departments: Agricultural Commissioner, U.C. Cooperative Extension, Board of Supervisors**
2. The County shall encourage urban water conservation and coordinate with conservation efforts of cities, local water districts and irrigation districts that deliver domestic water.  
**Responsible Departments: Environmental Resources, Board of Supervisors**
3. The County shall continue to implement adopted landscape and irrigation standards designed to reduce water consumption in the landscape environment.  
**Responsible Departments: Planning, Planning Commission, Board of Supervisors**
4. The County shall work with local irrigation districts to preserve water rights and ensure that water saved through conservation may be stored and used locally, rather than "appropriated" and moved to metropolitan areas outside of Stanislaus County.  
**Responsible Departments: Board of Supervisors**
5. **The County shall encourage the development and use of appropriately treated water (reclaimed wastewater and stormwater) for both agricultural and urban irrigation.**  
**Responsible Departments: Board of Supervisors**

#### **POLICY 3.5**

The County will continue to protect the quality of water necessary for crop production and marketing.

#### **IMPLEMENTATION MEASURES**

1. The County shall continue to require analysis of groundwater impacts in Environmental Impact Reports for proposed developments.  
**Responsible Departments: Environmental Resources, Planning, Planning Commission, Board of Supervisors**

2. The County shall investigate and adopt appropriate regulations to protect water quality.  
***Responsible Environmental Resources, Planning, Planning Commission, Board of Supervisors***

### **POLICY 3.6**

**The County will continue to protect local groundwater for agricultural, rural domestic, and urban use in Stanislaus County.**

### **IMPLEMENTATION MEASURES**

1. **The County shall implement the existing groundwater ordinance to ensure the sustainable supply and quality of local groundwater.**  
***Responsible Departments: Agricultural Commissioner, Environmental Resources, Planning, Planning Commission, Board of Supervisors***

### **OBJECTIVE NUMBER 3.3: Soil Resources**

The continued success of agriculture in Stanislaus County depends on conserving our soil resource. In addition to supporting the production of crops and livestock forage, soil is a vital part of the ecosystem and a record of past biological and physical processes. Formed slowly through the interaction of climate, living and decomposing organisms, local geology and erosion, soil is considered a non-renewable resource that requires proper management to ensure its continued productivity.

There are two main soil management problems in Stanislaus County: salinity, or the build-up of salts, and erosion caused by wind, water and irrigation. Salinity and irrigation induced salinity is especially problematic west of the San Joaquin River. Low quality irrigation water and poor drainage have resulted in the build up of salt and mineral concentrations in the soil. Wind erosion is more widespread in the coarse textured soils east of the San Joaquin River, resulting in the loss of productive topsoil and contributing to air and water quality problems.

Resource Conservation Districts (RCDs) provide assistance to control soil erosion and runoff, water conservation, stabilize soils, and protect water quality through cooperative agreements and grants with the USDA Natural Resources Conservation Service (NRCS). Through these agreements, the RCDs can prioritize resource concerns so that funding for conservation practices can be directed through NRCS.

The county is served by two Resource Conservation Districts. The East Stanislaus Resource Conservation District sphere of influence is east of the San Joaquin River and extends to the county lines. The West Stanislaus Resource Conservation District is located west of the San Joaquin River and extends to the county lines.

### **POLICY 3.76**

The County shall encourage the conservation of soil resources.

## IMPLEMENTATION MEASURES

1. The County shall continue to provide soil management information and coordinate with soil conservation efforts of local, state, and federal agencies.  
**Responsible Departments: Agricultural Commissioner, U.C. Cooperative Extension**
2. The County shall support efforts of local Resource Conservation Districts in their activities to support local agriculture.  
**Responsible Departments: Board of Supervisors**
3. The County shall continue to refer proposed developments whenever appropriate to Resource Conservation Districts and irrigation districts for their review and analysis of impacts on soil resources.  
**Responsible Departments: Planning**

## **DEFINITIONS**

Agricultural Land - Any land suited for agriculture.

Agricultural Uses - Land uses that are directly connected with or customarily incidental to agriculture.

Agriculture - The tilling of the soil, the raising of crops, horticulture, viticulture, small livestock farming, dairying, aquaculture, or animal husbandry, including all uses customarily incidental thereto but not including slaughterhouses, fertilizer yards, bone yards or plants for the reduction of animal matter or any other industrial use which is similarly objectionable because of noise, odor, smoke, dust or fumes.

Agricultural Service Establishment - A business engaging in activities designed to aid production agriculture. Service does not include the provision of tangible goods except those sold directly to farmers and used specifically to aid in production of farm animals or crops. Nor does service include any business which has the primary function of manufacturing products.

Buffer - A physical separation such as a topographic feature, a substantial stand of trees, a water course or similar feature that serves to protect or insulate one type of land use from another.

Clustering - A development technique that involves the grouping together of residences and other structures in a relatively small area, as opposed to dispersing those structures over a larger area.

Farmland - The type of agricultural land best suited for growing crops. In this document, "farmland" is used synonymously with "agricultural land" to mean any land suited for agriculture.

Grazing Land - Land on which existing vegetation is suited for the grazing of livestock.

Non-Agricultural Uses - Land uses that are not directly connected with or customarily incidental to agriculture.

**Prime Agricultural Land – Land which meets the criteria for prime agricultural land, as defined in the Stanislaus County Williamson Act Uniform Rules.**

Production Agriculture - Agriculture for the purpose of producing any and all plant and animal commodities for commercial purposes.

Ranchette - An individual parcel of land in an agricultural zone valued for its residential potential which cannot be supported by the agricultural income potential of the land.

Remote Development - Development that takes place away from existing cities or urban centers.

Right-to-Farm Ordinance - Stanislaus County Ordinance Code, Section 9.32.010, Chapter 9. A local ordinance that protects the rights of farmers to carry on their "normal" agricultural practices with a decreased risk of nuisance lawsuits.



Rural - Characteristic of the country, as distinguished from city or town.

Setback - The distance between the nearest point of the building or structure and the right-of-way or easement borderline or propertyline.

Urban - Characteristic of the city, as distinguished from the country.

Urban Development - In incorporated areas, development that is served by both public water and public sewer services; in unincorporated areas, development that is served by public water and/or public sewer services.

Urbanization - The process of changing from rural to urban in character.

**APPENDIX VII - A  
STANISLAUS COUNTY  
BUFFER AND SETBACK GUIDELINES**

## **Stanislaus County Buffer and Setback Guidelines**

### **Purpose and Intent:**

The purpose of these guidelines is to protect the long-term health of local agriculture by minimizing conflicts resulting from normal agricultural practices as a consequence of new or expanding uses approved in or adjacent to the A-2 (General Agriculture) zoning district.

The intent of these guidelines is to establish standards for the development and maintenance of buffers and setbacks designed to physically avoid conflicts between agricultural and non-agricultural uses.

### **Applicability:**

These guidelines shall apply to all new or expanding uses approved by discretionary permit<sup>1</sup> in the A-2 zoning district or on a parcel adjoining the A-2 zoning district. Uses located within a Local Agency Formation Commission (LAFCO) adopted Sphere of Influence (SOI) for an incorporated city shall be subject to these guidelines if the project site is located within 300 feet of any production agriculture operation, as defined by the Stanislaus County General Plan Agricultural Element, or the outer boundary of the SOI at the time of approval.

Low people intensive Tier One and Tier Two Uses (such as nut hulling, shelling, dehydrating, grain warehousing, and agricultural processing facilities) which do not serve the general public shall not be subject to compliance with these guidelines; however, conditions of approval consistent with these guidelines may be required as part of the project approval. The decision making body shall have the ultimate authority to determine if a use is “low people intensive”.

Buffer and setback requirements established by these guidelines shall be located on the parcel for which a discretionary permit is sought and shall protect the maximum amount of adjoining farmable land.

### **Buffer Design Standards for New Uses:**

- 1) All projects shall incorporate a minimum 150 foot wide buffer setback. Projects which propose people intensive outdoor activities, such as athletic fields, shall incorporate a minimum 300 foot wide buffer setback.
  - a. Permitted uses within a buffer area shall include:
    - i. Public roadways, utilities, drainage facilities, rivers and adjacent riparian areas, landscaping, parking lots, and similar low people intensive uses. Walking and bike trails shall be allowed within buffers setback areas provided they are designed without rest areas.

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<sup>1</sup>For purposes of these guidelines discretionary permit shall mean any general plan amendment, community plan amendment, rezone, tentative map, parcel map, use permit (excluding single-family dwellings in the A-2 zoning district), or variance processed by the County Planning & Community Development Department.

- ii. Permitted non-agricultural uses adjoining or surrounding a project site (including but not limited to legal non-conforming uses and homesites) which are of a permanent nature and not likely to be returned to agriculture.
  - b. Landscaping within a buffer setback area shall be designed to exclude turf areas which could induce activities and add to overall maintenance costs and water usage.
- 2) A six foot high fence of uniform construction shall be installed along the perimeter of the developed area of the use to prevent trespassing onto adjacent agricultural lands. Fencing shall not be required for uses which do not directly establish the potential for increased trespassing onto adjacent agricultural lands.

**Buffer and Setback Design Standards for Expanding Uses:**

- Where existing development on a project site will allow, accommodation of a buffer as required for new uses shall be provided.
- Where existing development on a project site will not allow a buffer as required for new uses, the expansion may be permitted only if it does not intensify on-site activities or an alternative buffer and setback design standard is approved for the expansion.

**Buffer and Setback Maintenance**

- Projects subject to these guidelines shall be conditioned to require the property owner(s) be responsible for all aspects of on-going maintenance of buffers and setback areas. The property owner(s) shall be responsible for maintaining landscape plants in a healthy and attractive condition.
- A landowners association or other appropriate entity shall be required to maintain buffers to control litter, fire hazards, pests, and other maintenance problems when a project consists of multiple parcels which may be held, or have the potential to be held, under separate ownership.
- The property owner, landowners association, or responsible entity shall be responsible for maintaining landscape plants in a healthy and attractive condition. Dead or dying plants shall be replaced with materials of equal size and similar variety within 30-days of weather permitting.
- When buffers are required as part of a specific plan, the County may require dedication of buffer areas and formation of service district to insure long-term up keep and maintenance of the buffer.

**Agricultural Transition:**

- The Board of Supervisors may authorize the abandonment and reuse of buffer areas if agricultural uses on all adjacent parcels within a 150-foot radius of the project site have permanently ceased.

**Alternative Buffer and Setback Design Standards:**

- Any alternative buffer and setback design standards proposed by a project applicant shall be referred to the Stanislaus County Agricultural Commissioner as part of the planning review process prior to consideration by the Stanislaus County Planning Commission. The Planning Commission shall consider the Agricultural Commissioner's referral response in making a determination on the proposed alternative. In no case shall the required standards be reduced, unless the proposed alternative is found to provide equal or greater protection to surrounding agricultural uses.

**APPENDIX VII - B  
STANISLAUS COUNTY  
FARMLAND MITIGATION PROGRAM GUIDELINES**

## **Stanislaus County Farmland Mitigation Program Guidelines**

### **Purpose and Intent:**

The purpose of the Farmland Mitigation Program (FMP) is to aid in mitigating the loss of farmland resulting from residential development in the unincorporated areas of Stanislaus County by requiring the permanent protection of farmland based on a 1:1 ratio to the amount of farmland converted. The FMP is designed to utilize agricultural conservation easements granted in perpetuity as a means of minimizing the loss of farmland.

The intent of these guidelines is to establish standards for the acquisition and long-term oversight of agricultural conservation easements purchased in accordance with the FMP.

### **Applicability:**

These guidelines shall apply to any development project requiring a General Plan or Community Plan amendment from 'Agriculture' to a residential land use designation of the Stanislaus County General Plan. The acreage requiring mitigation shall be equal to the overall size of the legal parcel subject to the land use designation amendment and not the portion of parcel actually being developed.

### **Definitions:**

#### **Agricultural Mitigation Land:**

Agricultural land encumbered by an agricultural conservation easement or other conservation mechanism acceptable to the County. "Agricultural land" is used synonymously with "farmland" in these guidelines.

#### **Agriculture Conservation Easement:**

An easement over agricultural land for the purpose of restricting its use to agriculture consistent with these guidelines. The interest granted pursuant to an agricultural conservation easement is an interest in land which is less than fee simple. Agricultural conservation easements acquired in accordance with these guidelines shall be established in perpetuity (or shall be permanently protected from future development via enforceable deed restriction).

#### **Building Envelope:**

An area delineated by the agricultural conservation easement within which existing structures may remain or future structures may be permitted to be built.

#### **Development Interest:**

The property owner, developer, proponent, and/or sponsor of a discretionary development project subject to these guidelines.

#### **Land Trust:**

A nonprofit public benefit 501(c)(3) corporation or other appropriate legal entity operating in Stanislaus County for the purpose of conserving and protecting land in agriculture, and approved for this purpose by the Board of Supervisors. The County may be designated as a Land Trust.



Legal Parcel:

A portion of land separated from another parcel or portion of land in accordance with the Subdivision Map Act. A separate Assessor's Parcel Number alone shall not constitute a legal parcel.

**Methods of Mitigation:** Farmland mitigation at a 1:1 ratio shall be satisfied by using one of the following techniques:

- 1) Where the total land area subject to a General Plan or Community Plan Amendment is less than 20-acres in size, farmland mitigation shall be satisfied by direct acquisition of an agricultural conservation easement or purchase of banked mitigation credits as set forth in these guidelines. Payment of an in-lieu mitigation fee may be authorized by the Board of Supervisors only when the development interest can show a diligent effort to obtain an agricultural conservation easement or banked mitigation credits have been made without success. Facts the Board may consider in making a decision regarding a request for payment of an in-lieu fee include, but are not limited to, a showing of multiple good faith offers to purchase an easement or banked mitigation credits having been declined by the seller(s).
- 2) Where the total land area subject to the General Plan or Community Plan Amendment is 20-acres or more in size, farmland mitigation shall be satisfied by direct acquisition of a farmland conservation easement as allowed by these guidelines and the Land Trust's program. It shall be the development interest's sole responsibility to obtain the required easement.
- 3) Alternative Farmland Conservation Methods - Alternative methods may be authorized by the Board of Supervisors provided the land will remain in agricultural use consistent with these guidelines. Any request for consideration of an alternative Farmland Conservation Method shall be reviewed by the Planning Commission for consistency with these guidelines prior to a decision by the Board of Supervisors.

• **Direct Acquisition (In-Kind Acquisition):**

- 1) The Board of Supervisors shall approve the acquisition of any agricultural conservation easement intended to satisfy the requirements of these guidelines.
- 2) The location and characteristics of the agricultural mitigation land shall comply with the provisions of these guidelines.
- 3) The development interest shall pay an administrative fee equal to cover the costs of administering, monitoring and enforcing the farmland conservation easement. The fee amount shall be determined by the Land Trust and approved by the Board of Supervisors.
- 4) The Planning Commission shall review each agricultural conservation easement for consistency with these guidelines prior to approval by the Board of Supervisors. The Commission shall make a formal recommendation to the Board for consideration.

- **In - Lieu Fees:** The payment of an in-lieu fee shall be subject to the following provisions:
  - 1) The in-lieu fee shall be determined case-by-case in consultation with the Land Trust approved by the County Board of Supervisors. In no case shall the in-lieu fee be less than 35% of the average per acre price for five (5) comparable land sales in Stanislaus County.
  - 2) The in-lieu fee shall include the costs of managing the easement, including the cost of administering, monitoring and enforcing the farmland conservation easement, and a five percent (5%) endowment of the cost of the easement, and the payment of the estimated transaction costs associated with acquiring the easement. The costs shall be approved by the Board of Supervisors based on information relating to the costs provided by the Land Trust.
  - 3) The Planning Commission shall review the final in-lieu fee proposal for consistency with these guidelines prior to approval by the Board of Supervisors. The Commission shall make a formal recommendation to the Board for consideration.
  - 4) The Board of Supervisors shall approve the final amount and other terms of the in- lieu fee.

**Use of In-lieu Fees** - In-lieu fees shall be administered by the Land Trust in fulfillment of its programmatic responsibilities. These responsibilities cover, without exception, acquiring interests in land and administering, monitoring and enforcing the agricultural conservation easement or other instrument designed to conserve the agricultural value of the land for farmland mitigation purposes and managing the land trust. The location and characteristics of agricultural mitigation land shall comply with the provisions of these guidelines.

- **Mitigation Credit Banking:** Mitigation credits may be banked and utilized in accordance with the following provisions:
  - 1) **Purpose** - The purpose of establishing a method of banking mitigation credits is to equalize the imbalance between the acreage size of farmland suitable, and available, for purchase of farmland conservation easements and the amount of acreage required to meet a 1:1 ratio.
  - 2) **Process** - Any project requiring the acquisition of an agricultural conservation easement in accordance with these guidelines may be approved by the Board of Supervisors to bank mitigation credits on the acreage in excess of the 1:1 ratio required for mitigation of the original project. The mitigation credits shall be held by the individual/entity purchasing the agricultural conservation easement.
  - 3) **Credit Value** - Each acre in excess of the required 1:1 ratio for mitigation may be utilized at a 1:1 ratio to satisfy the mitigation requirements of another development.

- 4) **Negotiations** - Negotiations to purchase mitigation credits shall not involve the County and shall be subject to free market values. The County shall make available a contact list of individuals/entities with banked credits on record. The sale of banked credits shall not alter the terms of the original farmland conservation easement which generated the credits.
- 5) **Authorization** - The Board of Supervisors shall accept purchased credits upon receipt of a sales agreement.
- 6) **Records** - The County shall maintain a record of banked credits and purchased credits to insure the Farmland Mitigation Program is maintained whole.

**Agricultural Mitigation Lands - Locations and characteristics:**

- 1) **Location** - Agricultural mitigation land shall be: A) located in Stanislaus County; B) designated Agriculture by the Land Use Element of the Stanislaus County General Plan; C) zoned A-2 (General Agriculture); and D) located outside a Local Agency Formation Commission (LAFCO) adopted Sphere of Influence of a city.
- 2) **Allowable Uses** - Agricultural Mitigation land shall be in conformance with the A-2 zoning district. Any legal nonconforming use of the property shall be abandoned prior to execution of the agricultural conservation easement and shall not be allowed to reestablish except as authorized within a building envelope. The type of agricultural related activity allowed on mitigation land shall be specified as part of the agricultural conservation easement and shall not be less restrictive than the A-2 zoning district.
- 3) **Parcel Size** - Agricultural mitigation land shall consist of legal parcel(s) of twenty(20) net acres or more in size. Parcels less than twenty (20) net acres in size shall only be considered if merged to meet the minimum size requirement prior to execution of the farmland conservation easement. Any building envelope allowed by the Land Trust shall not be counted towards the required parcel size.
- 4) **Soil Quality** - The agricultural mitigation land shall be of equal or better soil quality than the agricultural land whose use is being changed to nonagricultural uses. Priority shall be given to lands designated as 'prime farmland', 'farmland of statewide importance' and 'unique farmland' by the California Department of Conservation's Farmland Mapping and Monitoring Program.
- 5) **Water Supply** - The agricultural mitigation land shall have an adequate water supply to support the agricultural use of the land. The water rights on the agricultural mitigation land shall be protected in the farmland conservation easement.
- 6) **Previous Encumbrances** - Land already effectively encumbered by a conservation easement of any nature is not eligible to qualify as agricultural mitigation land.

**Final Approval:**

Final approval of any project subject to these guidelines shall be contingent upon the execution of any necessary legal instrument and/or payment of fees as specified by these guidelines. Final approval shall be obtained prior to any of the following: 1) the issuance of any building, grading or encroachment permit(s) required for development, 2) recording of any parcel or final subdivision map, or 3) operation of the approved use.

**Legal Instruments for Encumbering Agricultural Mitigation Land:**

**Requirement** - To qualify as an instrument encumbering the land for agricultural mitigation: 1) all owners of the agricultural mitigation land shall execute the instrument; 2) the instrument shall be in recordable form and contain an accurate legal description of the agricultural mitigation land; 3) the instrument shall prohibit any activity which impairs or diminishes the agricultural productivity of the agricultural mitigation land; 4) the instrument shall protect the existing water rights and retain them with the agricultural mitigation land; 5) the interest in the agricultural mitigation land shall be held in trust by the Land Trust and/or the County in perpetuity; 6) the Land Trust or County shall not sell, lease, or convey any interest in the agricultural mitigation land except for fully compatible agricultural uses; and 7) if the Land Trust ceases to exist, the duty to hold, administer, monitor, and enforce the interest shall pass to the County to be retained until a qualified entity to serve as the Land Trust is located.

**Monitoring, Enforcing, and Reporting:**

- 1) **Monitoring and Enforcing** - The Land Trust shall monitor all lands and easements acquired in accordance with these guidelines and shall review and monitor the implementation of all management and maintenance plans for these lands and easement areas. It shall also enforce compliance with the terms of the conservation easement or agricultural mitigation instruments.
- 2) **Reporting by the Land Trust** - Annually, beginning one year after the adoption of this chapter, the Land Trust shall provide to the County Planning Director an annual report delineating the activities undertaken pursuant to the requirements of these guidelines and assessment of these activities. The report(s) shall describe the status of all lands and easements acquired in accordance with these guidelines, including a summary of all enforcement actions.

**Stacking of Conservation Easements:**

Stacking of easements for both habitat conservation easements on top of an existing agricultural easement granted in accordance with these guidelines may be allowed if approved by the Board of Supervisors provided the habitat needs of the species addressed by the conservation easement shall not restrict the active agricultural use of the land.

- The Commission, with input from the County Agricultural Advisory Board, shall review all stacking proposals to insure the stacking will not be incompatible with the maintenance and preservation of economically sound and viable agricultural activities and operations. The recommendation of the Commission shall be considered by the Board of Supervisors.