

DRAFT

**STANISLAUS COUNTY GENERAL PLAN AND
AIRPORT LAND USE COMPATIBILITY PLAN UPDATE
DRAFT PROGRAM
ENVIRONMENTAL IMPACT REPORT**

PREPARED FOR:

Stanislaus County
Planning and Community Development Department
1010 Tenth Street, Suite 3400
Modesto, CA 95354
Contact: Kristin Doud, Associate Planner
209.525.6330

PREPARED BY:

ICF International
630 K Street, Suite 400
Sacramento, CA 95814
Contact: Terry Rivasplata
916.737.3000

April 2016



ICF International. 2016. *Stanislaus County General Plan and Airport Land Use Compatibility Plan Update Draft Program Environmental Impact Report*. Draft. April. (ICF 00203.10.) Sacramento, CA. Prepared for Stanislaus County, Modesto, CA.

Contents

List of Tables	vi
List of Figures.....	viii
List of Acronyms and Abbreviations.....	ix
Executive Summary	ES-1
ES.1 Purpose	ES-1
ES.2 Project Summary.....	ES-1
ES.2.1 General Plan Update Objectives	ES-3
ES.2.2 Airport Land Use Compatibility Plan Objectives	ES-3
ES.3 Summary of Environmental Impacts and Mitigation Measures	ES-4
ES.4 Significant and Unavoidable Impacts.....	ES-15
ES.4.1 Aesthetics, Light, and Glare	ES-15
ES.4.2 Air Quality	ES-15
ES.4.3 Cultural Resources	ES-15
ES.4.4 Hydrology and Water.....	ES-15
ES.4.5 Noise	ES-15
ES.4.6 Recreation.....	ES-16
ES.4.7 Transportation	ES-16
ES.4.8 Utilities and Service Systems	ES-16
ES.5 Summary of Alternatives	ES-16
ES.5.1 Alternative 1—No Project Alternative	ES-17
ES.5.2 Alternative 2—Reduced Developable Area	ES-17
ES.6 Areas of Known Controversy and Issues to be Resolved	ES-18
ES.6.1 Areas of Known Controversy	ES-18
ES.6.2 Disagreement among Experts.....	ES-19
ES.7 Public Review of the Draft Program EIR	ES-19
ES.8 Future Use of this Program EIR.....	ES-20
Chapter 1 Introduction	1-1
1.1 California Environmental Quality Act	1-1
1.1.1 Purpose of the Environmental Impact Report.....	1-1
1.1.2 Program EIR	1-3
1.1.3 Level of Detail	1-3
1.2 Intended Use of the Environmental Impact Report	1-4
1.2.1 General Plan Adoption.....	1-4
1.2.2 Future Use of this EIR.....	1-4

1.3	Environmental Impact Report Focus	1-5
1.4	Document Format.....	1-5
1.5	Approach to the Impact Analysis	1-6
Chapter 2 Project Description		2-1
2.1	Background	2-1
2.2	Project.....	2-2
2.2.1	Stanislaus County General Plan Update	2-2
2.2.2	Airport Land Use Compatibility Plan.....	2-16
Chapter 3 Impact Analysis.....		3-1
3.1	Aesthetics.....	3.1-1
3.1.1	Introduction	3.1-1
3.1.2	Environmental Setting	3.1-1
3.1.3	Impact Analysis	3.1-10
3.1.4	References Cited	3.1-26
3.2	Agricultural Resources	3.2-1
3.2.1	Introduction	3.2-1
3.2.2	Environmental Setting	3.2-1
3.2.3	Impact Analysis	3.2-8
3.2.4	References Cited	3.2-14
3.3	Air Quality	3.3-1
3.3.1	Introduction	3.3-1
3.3.2	Environmental Setting	3.3-1
3.3.3	Impact Analysis	3.3-20
3.3.4	References Cited	3.3-31
3.4	Biological Resources	3.4-1
3.4.1	Introduction	3.4-1
3.4.2	Environmental Setting	3.4-1
3.4.3	Impact Analysis	3.4-22
3.4.4	References Cited	3.4-33
3.5	Cultural Resources	3.5-1
3.5.1	Introduction	3.5-1
3.5.2	Environmental Setting	3.5-1
3.5.3	Impact Analysis	3.5-12
3.5.4	References Cited	3.5-16
3.6	Geology, Soils, and Paleontological Resources.....	3.6-1
3.6.1	Introduction	3.6-1
3.6.2	Environmental Setting	3.6-1

3.6.3	Impact Analysis	3.6-16
3.6.4	References Cited	3.6-22
3.7	Greenhouse Gas Emissions and Energy	3.7-1
3.7.1	Introduction	3.7-1
3.7.2	Environmental Setting	3.7-2
3.7.3	Impact Analysis	3.7-14
3.7.4	References Cited	3.7-21
3.8	Hazards and Hazardous Materials	3.8-1
3.8.1	Introduction	3.8-1
3.8.2	Environmental Setting	3.8-1
3.8.3	Impact Analysis	3.8-8
3.8.4	References Cited	3.8-14
3.9	Hydrology and Water Quality	3.9-1
3.9.1	Introduction	3.9-1
3.9.2	Environmental Setting	3.9-1
3.9.3	Impact Analysis	3.9-13
3.9.4	References Cited	3.9-23
3.10	Land Use and Planning	3.10-1
3.10.1	Introduction	3.10-1
3.10.2	Environmental Setting	3.10-1
3.10.3	Impact Analysis	3.10-11
3.10.4	References Cited	3.10-20
3.11	Mineral Resources	3.11-1
3.11.1	Introduction	3.11-1
3.11.2	Environmental Setting	3.11-1
3.11.3	Impact Analysis	3.11-3
3.11.4	References Cited	3.11-5
3.12	Noise	3.12-1
3.12.1	Introduction	3.12-1
3.12.2	Environmental Setting	3.12-5
3.12.3	Impact Analysis	3.12-20
3.12.4	References Cited	3.12-33
3.13	Population and Housing	3.13-1
3.13.1	Introduction	3.13-1
3.13.2	Environmental Setting	3.13-1
3.13.3	Impact Analysis	3.13-6
3.13.4	References Cited	3.13-11

3.14	Public Services.....	3.14-1
3.14.1	Introduction	3.14-1
3.14.2	Environmental Setting	3.14-1
3.14.3	Impact Analysis	3.14-13
3.14.4	References Cited	3.14-19
3.15	Recreation.....	3.15-1
3.15.1	Introduction	3.15-1
3.15.2	Environmental Setting	3.15-1
3.15.3	Impact Analysis	3.15-10
3.15.4	References Cited	3.15-13
3.16	Transportation and Traffic	3.16-1
3.16.1	Introduction	3.16-1
3.16.2	Environmental Setting	3.16-1
3.16.3	Impact Analysis	3.16-11
3.16.4	References Cited	3.16-30
3.17	Utilities and Service Systems	3.17-1
3.17.1	Introduction	3.17-1
3.17.2	Environmental Setting	3.17-1
3.17.3	Impact Analysis	3.17-9
3.17.4	References Cited	3.17-16
Chapter 4 Alternatives		4-1
4.1	Project Objectives	4-1
4.2	Significant Impacts.....	4-2
4.2.1	Aesthetics.....	4-2
4.2.2	Air Quality	4-2
4.2.3	Biological Resources	4-2
4.2.4	Cultural Resources	4-2
4.2.5	Geology, Soils, and Paleontological Resources.....	4-2
4.2.6	Hydrology and Water Quality	4-2
4.2.7	Noise	4-2
4.2.8	Recreation.....	4-3
4.2.9	Transportation and Traffic	4-3
4.2.10	Utilities and Service Systems	4-3
4.3	Methodology and Screening Criteria	4-3
4.4	Alternatives Considered but Rejected	4-4
4.5	Alternatives Analyzed in this EIR.....	4-4
4.5.1	Alternative 1—No Project Alternative	4-4

4.5.2	Alternative 2—Reduced Developable Area	4-7
4.6	Environmentally Superior Alternative	4-12
4.7	References Cited	4-13
Chapter 5 Other CEQA Considerations		5-1
5.1	Overview	5-1
5.2	Cumulative Impacts	5-1
5.2.1	Agricultural Resources	5-2
5.2.2	Air Quality	5-3
5.2.3	Biological Resources	5-3
5.2.4	Noise	5-4
5.2.5	Recreation.....	5-4
5.2.6	Traffic/Transportation	5-5
5.2.7	Water Supply	5-6
5.3	Growth Inducing Impact	5-7
5.4	Significant and Unavoidable Impacts.....	5-7
5.5	Significant Irreversible Environmental Changes Which Cannot Be Avoided if the Project is Implemented.....	5-9
5.6	References Cited	5-10
Chapter 6 List of Preparers.....		6-1
 APPENDICES		
Appendix A	Notice of Preparation	
Appendix B	Proposed Updated Text to the Stanislaus County General Plan and Airport Land Use Compatibility Plan	
Appendix C1	Traffic Data Used in Emissions Modeling	
Appendix C2	2014 CT-EMFAC Emissions Factors	
Appendix D	Stanislaus Countywide Regional Community Greenhouse Gas Inventory	

Tables

	Page
ES-1	Key Components of the General Plan and ALUCP..... ES-2
ES-2	Summary of Impacts and Mitigation Measures ES-5
ES-3	Summary of General Plan Alternatives Impacts..... ES-17
3.2-1	Stanislaus County Williamson Act Acreage, 2010 3.2-2
3.2.2	Stanislaus County Land Uses, in Acres 3.2-8
3.3-1	National and State Ambient Air Quality Standards..... 3.3-6
3.3-2	Recent Criteria Air Pollutant Levels for Stanislaus County..... 3.3-13
3.3-3	Federal and State Attainment Status for Stanislaus County 3.3-16
3.3-4	Stanislaus County Existing (2012) Emissions Inventory 3.3-17
3.3-5	Summary of Emissions by Analysis Year and Study Scenario 3.3-25
3.3-6	Summary of Emissions by Conformity and SB 375 Conditions 3.3-26
3.3-7	Carbon Monoxide Concentrations at Greatest Affected Roadway Segments 3.3-28
3.3-8	SJVAPCD Project Screening Trigger Levels for Potential Odor Sources 3.3-31
3.4-1	Land Cover Types in Stanislaus County 3.4-8
3.4-2	Special-Status Plants Occurring in Stanislaus County 3.4-15
3.4-3	Special-Status Animals Occurring in Stanislaus County 3.4-18
3.5-1	Stanislaus County Historical Resources..... 3.5-11
3.6-1	Paleontological Sensitivity Ratings..... 3.6-11
3.6-2	Paleontological Resources by Geologic Unit 3.6-12
3.6-3	General Correlation of Geologic Units Shown on Figures 3.6-1 and 3.6-5 3.6-15
3.6-4	Society of Vertebrate Paleontology’s Recommended Treatment for Paleontological Resources..... 3.6-17
3.7-1	Abundances, Lifetimes, and Global Warming Potentials of Primary Greenhouse Gases 3.7-11
3.7-2	Global, National, State, and Local GHG Emissions Inventories 3.7-13
3.7-3	Summary of Emissions by Analysis Year and Study Scenario 3.7-18
3.9-1	California Department of Water Resources List of Priority Groundwater Basins within Stanislaus County 3.9-5

3.9-2	Impaired Water Bodies in the Project Area	3.9-11
3.10-1	StanCOG Regional Housing Need Allocation for 2014–2023	3.10-2
3.10-2	Pertinent General Plan Policies for Jurisdictions within Airport Influence Areas	3.10-5
3.12-1	Definition of Sound Measurements	3.12-2
3.12-2	Typical A-Weighted Sound Levels	3.12-3
3.12-3	Vibration Source Levels for Construction Equipment	3.12-4
3.12-4	Guideline Vibration Damage Potential Threshold Criteria	3.12-5
3.12-5	Guideline Vibration Annoyance Potential Criteria	3.12-5
3.12-6	Exterior Noise-Level Standards	3.12-9
3.12-7	Cumulative Duration Allowance Standards.....	3.12-10
3.12-8	Traffic Noise Modeling Results for Base Year Conditions (2014).....	3.12-11
3.12-9	Summary of Stationary Sources in Stanislaus County.....	3.12-18
3.12-10	Summary of Community Noise Survey.....	3.12-19
3.12-11	Typical Construction Noise Levels	3.12-22
3.12-12	Typical Construction Vibration Levels	3.12-23
3.12-13	Future Traffic Noise Levels	3.12-24
3.13-1	StanCOG Regional Housing Need Allocation for 2014–2023	3.13-3
3.13-2	Population Distribution for Stanislaus County, 2000 to 2010.....	3.13-5
3.13-3	Regional Population Forecast (by local jurisdiction)	3.13-6
3.14-1	Stanislaus County Fire Departments	3.14-8
3.14-2	Stanislaus Consolidated Fire Protection District Facilities	3.14-9
3.14-3	Schools Districts in Stanislaus County	3.14-10
3.14-4	Library Facilities in Stanislaus County	3.14-12
3.15-1	Existing Local Parks and Recreational Facilities.....	3.15-8
3.15-2	Shortages in Neighborhood Parks.....	3.15-11
3.16-1	Roadway Segment Level of Service Criteria	3.16-8
3.16-2	Base Year and Future Roadway Volumes and Levels of Service	3.16-13
3.16-3	Regional Transportation Performance Measures for Stanislaus County	3.16-24
4-1	Comparison of Alternatives’ Environmental Impacts	4-13

Figures follow the chapter or resource section in which they are referenced.

- 2-1 Project Location
- 3.4-1 Land Cover in Stanislaus County
- 3.4-2 Critical Habitat in Stanislaus County
- 3.4-3 Wildlife Movement Corridors
- 3.6-1 Geology Map
- 3.6-2 Stanislaus General Plan Update Fault Map
- 3.6-3 Ground Shaking Potential
- 3.6-4 Stanislaus General Plan Update Soils Map
- 3.6-5 General Paleontological Sensitivity Map of Stanislaus County
- 3.9-1 Hydrological Features within the Project Vicinity
- 3.9-2 Groundwater Basins within the Project Area
- 3.9-3 FEMA Flood Zones within the Project Area
- 3.10-1 General Plan Designations
- 3.10-2 Airport Influence Area Policy Map—Modesto City-County Airport
- 3.10-3 Airport Influence Area Policy Map—Oakdale Airport
- 3.12-1 Land Use Compatibility for Community Noise Environments
- 3.12-2 Noise Contours for Modesto City-County Airport from the 2004 Airport Land Use Commission Plan
- 3.12-3 Predicted Year 2030 Traffic Noise Levels
- 3.12-4 Airport Noise Zones Policy Map—Modesto City-County Airport
- 3.12-5 Airport Noise Zones Policy Map—Oakdale Municipal Airport
- 3.16-1 Roadway Classification
- 3.16-2 Base Year Daily Level of Service, Stanislaus County
- 3.16-3 Collisions 2010–2012, Stanislaus County
- 3.16-4 Year 2035 Daily Level of Service

Acronyms and Abbreviations

µg/m ³	micrograms per cubic meter
2014 RTP/SCS	Final 2014 Regional Transportation Plan/Sustainable Communities Strategies
AB	Assembly Bill
AB 1807	Tanner Air Toxics Act, Toxic Air Contaminant Identification and Control Act
AB 2588	Air Toxics Hot Spots Information and Assessment Act of 1987
ACE	Agricultural Conservation Easement
ACE	Altamont-Commuter Express
AIA	Airport Influence Area
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
APA	American Planning Association
APCO	Air Pollution Control Officer
ARAs	Aggregate Resource Areas
ARB	California Air Resources Board
ARC	Airport Reference Code
ASTs	aboveground storage tanks
ATCMs	Airborne Toxic Control Measures
BAM	Best Available Maps
BART	Bay Area Rapid Transit system
basin plans	water quality control basin plans
BAT	best available technology
BAU	business-as-usual
BGEPA	Bald and Golden Eagle Protection Act
BMPs	best management practices
BNSF	Burlington Northern Santa Fe
BPS	best performance standards
BTU	British thermal units
Business Plan Act	Hazardous Materials Release Response Plans and Inventory Act
C2H3Cl	vinyl chloride
CAA	federal Clean Air Act
CAAA	1990 Clean Air Act amendments
CAAQS	California ambient air quality standards
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
CalARP	California Accidental Release Prevention Program
Cal-EPA	California Environmental Protection Agency
CALGreen	California Building Standards Commission adopted the mandatory Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CBC	California Building Code
CBSC	California Building Standards Code

CCAA	California Clean Air Act
CCAs	Community Choice Aggregations
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEHC	California Essential Habitat Connectivity
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CESA	California Endangered Species Act
CFCP	California Farmland Conservancy Program
CFR	Code of Federal Regulations
CH ₄	methane
CMA	Congestion Management Agency
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPPA	California Native Plant Protection Act
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
COG	Council of Government
Construction General Permit	<i>General NPDES Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ)</i>
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CSAs	County Service Areas
CSD	Community Services District
CTC	California Transportation Commission
CUPA	Certified Unified Program Agency
CVFPA	Central Valley Flood Protection Act
CVFPB	Central Valley Flood Protection Board
CVFPP	Central Valley Flood Protection Plan
CVRWQCB	California Regional Water Quality Control Board, Central Valley Region
CWA	Clean Water Act
dB	decibel
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
Delta	Sacramento–San Joaquin River Delta
DOF	Department of Finance
DPM	diesel particulate matter
DWR	California Department of Water Resources
Eagle Guidance	Eagle Conservation Plan Guidance
ECAs	Essential Connectivity Areas
EIR	environmental impact report
EO	Executive Order
EP Act	Energy Policy Act of 2005

EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESPs	energy service providers
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRMs	flood insurance rate maps
FMMP	Farmland Mapping and Monitoring Program
FR	Federal Register
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
g	acceleration speed of gravity
GA	general aviation
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
GAP	Gap Analysis Program
GHG	greenhouse gas
GIS	Geographic Information Systems
GMP	Groundwater Management Plan
GWP	global warming potential
GWR	Gross Weight Rating
H ₂ S	hydrogen sulfide
HAPs	Hazardous Air Pollutants
HCD	Department of Housing and Community Development
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HFCs	hydrofluorocarbons
HRA	Health Risk Assessment
HSR	high speed rail
HUC	Hydrologic Unit Code
HUD	U.S. Department of Housing and Urban Development
I-5	Interstate 5
IBC	International Building Code
INM	Integrated Noise Model
IOUs	investor-owned utilities
IPCC	Intergovernmental Panel on Climate Change
IS/MND	initial study/mitigated negative declaration
L ₁₀ , L ₂₀	percentile-exceeded sound levels
LAFCO	Local Agency Formation Commission
LCFS	Low Carbon Fuel Standard
L _{dn}	day-night sound level
L _{eq}	equivalent sound level
LID	Low Impact Development
L _{min} and L _{max}	minimum and maximum sound levels
LOS	Level of service

LSAA	Lake and Streambed Alteration Agreement
M&ET	Modesto and Empire Traction
MAX	Modesto Area Express
MBTA	Migratory Bird Treaty Act
MID	Modesto Irrigation District
mph	mile-per-hour
MPOs	metropolitan planning organizations
MRZ	Mineral Resource Zone
MS4	municipal separate storm sewer system
MS4 Permit	<i>General Permit for Municipal Separate Storm Sewer Systems (MS4)</i>
MSR	Municipal Services Review
MWELo	Updated Model Water Efficient Landscape Ordinance
N ₂ O	nitrogen dioxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Act
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NMTP	Non-Motorized Transportation Plan
NO	nitrous oxide
NO ₂	nitrogen dioxide
NOA	Naturally Occurring Asbestos
NOP	Notice of Preparation
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
ODS	ozone-depleting substances
OES	California Office of Emergency Services
OID	Oakdale Irrigation District
Pb	lead
PFCs	perfluorocarbons
PFF	Public Facilities Fee
PG&E	Pacific Gas and Electric Company
PM	particulate matter
PM ₁₀	PM 10 microns in diameter or less
PM _{2.5}	PM 2.5 microns in diameter or less
Porter-Cologne Act	Porter-Cologne Water Quality Control Act of 1969
ppb	parts per billion
ppm	parts per million
ppt	parts per trillion
PPV	peak particle velocity
PRC	Public Resources Code

project	proposed Stanislaus County General Plan update and Airport Land Use Compatibility Plan update
RCRA	Resource Conservation and Recovery Act of 1976
Reporting Rule	Greenhouse Gas Reporting Rule
RHA	River and Harbors Appropriation Act of 1899
RHNA	Regional Housing Needs Allocation
RHNP	Regional Housing Needs Plan
RMP	Risk Management Plan
ROGs	reactive organic gases
RPS	Renewables Portfolio Standard
RTIF	Regional Transportation Impact Fee
RTP	Regional Transportation Plan
RTP/SCS	2014 Regional Transportation Plan/Sustainable Communities Strategy
RWMP	Integrated Regional Water Management Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SB 50	Senate Bill 50
SCFPD	Stanislaus Consolidated Fire Protection District
SCS	sustainable communities strategy
SCSD	Stanislaus County Sheriff's Department
SF ₆	sulfur hexafluoride
SFM	State Fire Marshal
SGMA	Sustainable Groundwater Management Act
SIP	state implementation plan
SJV	San Joaquin Valley
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLC	State Lands Commission
SMARA	Surface Mining and Reclamation Act of 1975
SO ₂	sulfur dioxide
SO ₄	sulfates
SR	State Route
SR-99	State Route 99
SRAs	State Responsible Areas
SRRF	Stanislaus Resource Recovery Facility
SSC	species of special concern
STAA	Service Transportation Assistance Act of 1982
StanCOG	Stanislaus Council of Governments
StanCOG EIR	Final Programmatic Environmental Impact Report, 2014 Regional Transportation Plan/Sustainable Communities Strategy, Stanislaus County
StaRT	Stanislaus Regional Transit
STIP	State Transportation Improvement Program
SVP	Society of Vertebrate Paleontology
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TACs	Toxic air contaminants
TAZ	traffic analysis zone
TCM	Three-County Model travel demand model

TCMs	traffic control measures
TDS	total dissolved solids
TID	Turlock Irrigation District
TMDL	total maximum daily load
TNM	Traffic Noise Model
TSDFs	treatment, storage, and disposal facilities
U.S. DOE	U.S. Department of Energy
UCMP	University of California Museum of Paleontology
UPRR	Union Pacific Railroad
US	Urban Services
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USTs	underground storage tanks
VMT	vehicle miles traveled
VOCs	volatile organic compounds
WDRs	waste discharge requirements
WHR	Wildlife-Habitat Relationships

ES.1 Purpose

This environmental impact report (EIR) has been prepared to evaluate and disclose the significant environmental impacts associated with implementation of the proposed Stanislaus County General Plan Update and Airport Land Use Compatibility Plan (project). This is an update of the County's existing plans for the unincorporated areas of the County. Impacts are evaluated on the basis of the plans' 2035 planning horizon. Copies of the proposed general plan update and new Airport Land Use Compatibility Plan are available at the County Planning and Community Development Department office at the address listed below. Copies are also available online at the County's website: <http://www.stancounty.com/planning/pl/GPupdate.shtm>.

This EIR has been prepared in accordance with California Environmental Quality Act (CEQA), California Resources Code Section 21000 et seq., and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3). Accordingly, it discusses the existing physical and regulatory setting, describes the plans, and examines the plans' potential to result in significant effects on the physical environment. In addition to disclosing significant environmental impacts, the EIR also proposes mitigation measures, where feasible, to minimize or otherwise avoid significant environmental impacts and reviews two alternatives to the plans.

The purpose of this EIR is to inform Stanislaus County decision-makers, representatives of other affected/responsible agencies, the public, and other interested parties of the potential environmental effects that may be associated with the project. As authorized under State CEQA Guidelines Section 15146, the project's impacts are analyzed on a general scale, in keeping with the broad level of detail found in the plans themselves. Accordingly, the reader should not expect to find parcel-specific analyses here.

ES.2 Project Summary

The proposed project consists of an update of the existing Stanislaus County General Plan and the separate Airport Land Use Compatibility Plan (ALUCP). Stanislaus County is located at the northern end of the San Joaquin Valley and is bounded by Santa Clara County to the west, San Joaquin County to the north, Calaveras and Tuolumne counties to the east, and Merced County to the south (see Figure 2-1).

California Planning Law (Government Code Section 65300 et seq.) requires the County to adopt "comprehensive, long-term general plan for the physical development of the county." The general plan serves as a "blueprint" for growth; that is, it establishes the general pattern of land use and adopts goals and policies to guide the County in future land use decision-making. The proposed general plan update conforms to California Planning Law and is being considered for the purpose of ensuring that the general plan meets all current requirements of state law. The update consists solely of amendments to the goals, policies, and implementation measures of the general plan. It does not include any changes to the general plan's land use map.

The ALUCP conforms to Airport Land Use Commission Law (Public Utilities Code 21670 et seq.) and provides for the orderly growth of each public airport and the area surrounding the airport to safeguard the general welfare of the inhabitants near the airport and the public in general. The ALUCP reflects the anticipated growth of each airport during at least the next 20 years. The ALUCP includes height restrictions on buildings, specifies use of land within its planning areas, and determine building standards, including soundproofing adjacent to airports, within the airport influence area. The ALUCP is consistent with the general plan.

The proposed project is described in Section 2, *Project Description*, of this Draft EIR. Table ES-1 provides a brief summary of the key components of the proposed project. For more detail, see Chapter 2.

Table ES-1. Key Components of the General Plan and ALUCP

Issue Area	General Plan
Elements Affected	Land Use, Circulation, Conservation/Open Space, Noise, Safety
Land Use	Adds and amends goals and policies to conform the general plan to current state, regional, and local requirements. No changes are proposed to the land use diagram. Changes address the elimination of the Redevelopment Agency, new policies encouraging economic development, strengthened policies related to connecting new development to public water and sewer, strengthened policies related to growth management and preference for new development to occur in cities, and new policies related to “complete streets.”
Agricultural	Updates this element to address the Food Safety Modernization Act (FSMA); add an implementation measure encouraging the development of alternative energy sources on lands located outside “Most Productive Agricultural Areas;” add an implementation measure encouraging the development and use of appropriately treated water (reclaimed wastewater and stormwater) for both agricultural and urban irrigation; and add a policy and implementation measures on the subject of protecting local groundwater for agricultural, rural domestic, and urban use in Stanislaus County.
Circulation	Updates the nomenclature for roads within the county to match federal and state standards. Other changes include amending the policy of maintaining Level of Service (LOS) C on county roads at LOS D or better for motorized vehicles on all roadway segments and LOS of C or better for motorized vehicles at all roadway intersections, updating the County road standards, updating the study areas for future major roads, revising the standards for project-level traffic impact analysis, clarifying that new development will pay its fair share of road impacts attributable to that development, requiring multi-modal facilities, and updating references to documents and agencies.
Conservation/ Open Space	Changes include new policies to avoid conflicts between airport operations and new wildlife habitat; require mitigation for impacts on wetlands as may be required by the California Department of Fish and Wildlife; encourage better management of water resources, including groundwater, through county actions and cooperation with other agencies; strengthen policies requiring dedication of parks and recreation facilities with new development; review development proposals for conformance with all applicable Hazard Mitigation Plans and the Safety Element; and updated references to documents and agencies.
Noise	Changes include a policy commitment to enforce the Stanislaus County Noise Control Ordinance to reduce the number of incidents of excessive noise; new policies related to review of projects for airport noise conflicts, and updated references to documents and agencies.

Issue Area	General Plan
Safety	Changes include strengthened policies regarding review of projects for fire hazard; new references to the ALUCP and coordination of project review with the Airport Land Use Commission; strengthened flood protection policies; and updated references to documents, such as the Multi-Jurisdictional Hazard Mitigation Plan, and public agencies.
ALUCP (not part of the general plan)	Updates the ALUCP to meet the standards for this type of plan established in the California Department of Transportation's current <i>Airport Land Use Planning Handbook</i> . That includes revisions to the Airport Influence Areas and elimination of ALUCPs for airports that no longer qualify for inclusion.

ES.2.1 General Plan Update Objectives

The proposed general plan has the following objectives.

- To comprehensively review and amend the general plan to incorporate current requirements of State law related to planning issues.
- To update existing and incorporate new goals, objectives, policies, and implementation measures to reflect local changes in land use policy.
- To update technical data found within the general plan and support documents.
- To update the ALUCP to ensure consistency with the general plan; incorporate the requirements of the California Department of Transportation's (Caltrans') *Airport Land Use Planning Handbook*; and reflect new information relating to noise contours, safety zones, airspace protection zones, overflight areas, and current city general plan provisions.
- To prepare the environmental documentation necessary to support adoption of the general plan update and ALUCP update.
- To make these revisions while limiting changes to the land use diagram to a minimum.

ES.2.2 Airport Land Use Compatibility Plan Objectives

The proposed ALUCP has the following objectives:

- To update the ALUCP to ensure consistency with the general plan; incorporate the requirements of the California Department of Transportation's (Caltrans') *Airport Land Use Planning Handbook*; and reflect new information relating to noise contours, safety zones, airspace protection zones, overflight areas, and current city general plan provisions
- To prepare the environmental documentation necessary to support adoption of the general plan update and ALUCP
- Provide for the orderly growth of each public airport and the area surrounding the airport to safeguard the general welfare of the inhabitants near the airport and the public in general.
- Establish height restrictions on buildings, specifies use of land within its planning areas, and determine building standards, including soundproofing adjacent to airports, within the airport influence area to limit impacts on residents near the airports.
- Control new development near airports in order to minimize conflicts between the airport and that development.

ES.3 Summary of Environmental Impacts and Mitigation Measures

Implementation of the plans would result in a number of significant impacts on the environment. At the same time, the general plan and ALUCP contain many policies that are intended to minimize or mitigate the potential impacts of their implementation. The analysis in this Program EIR considered the policies contained in the 2007 General Plan when determining whether the plans would result in a significant environmental impact. Where the policies are insufficient to avoid an impact, additional mitigation is identified in the Program EIR. Table ES-2 briefly summarizes the impacts and mitigation measures that have been identified in the Program EIR.

Table ES-2. Summary of Impacts and Mitigation Measures

Impact	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
3.1 Aesthetics			
Impact AES-1: Substantially degrade the existing visual character or quality of the county and its surroundings, including scenic vista	Less than significant	–	–
Impact AES-2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway	Less than significant	–	–
Impact AES-3: Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area	Significant	No mitigation available	Significant and unavoidable
3.2 Agricultural Resources			
Impact AGR-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural use	Less than significant	–	–
Impact AGR-2: Conflict with existing zoning for agricultural use or a Williamson Act contract	Less than significant	–	–
Impact AGR-3: Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g])	Less than significant	–	–
Impact AGR-4: Result in the loss of forestland or conversion of forestland to non-forest use	Less than significant	–	–
Impact AGR-5: Involve other changes in the existing environment that, because of their location or nature, could result in the conversion of farmland to non-agricultural use or the conversion of forestland to non-forest use	Less than significant	–	–

Impact	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
3.3 Air Quality			
Impact AQ-1: Generate construction-related emissions in excess of SJVAPCD thresholds	Significant	No mitigation available	Significant and unavoidable
Impact AQ-2: Generate on-road mobile source criteria pollutant emissions in excess of SJVAPCD thresholds	Less than significant	–	–
Impact AQ-3: Expose sensitive receptors to substantial concentrations of carbon monoxide	Less than significant	–	–
Impact AQ-4: Expose sensitive receptors to substantial pollutant concentrations	Less than significant	–	–
Impact AQ-5: Expose sensitive receptors to substantial odors	Less than significant	–	–
3.4 Biological Resources			
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	Less than significant	–	–
Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	Less than significant	–	–
Impact BIO-3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) or waters of the State through direct removal, filling, hydrological interruption, or other means	Less than significant	–	–
Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites	Significant	No mitigation available	Significant and unavoidable

Impact	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources	No Impact	–	–
Impact BIO-6: Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan	No impact	–	–
Impact BIO-6: Introduce or spread invasive species	Less than significant	–	–

3.5 Cultural Resources

Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5	Significant	No mitigation available	Significant and unavoidable
Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5	Significant	No mitigation available	Significant and unavoidable
Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries	Less than significant	–	–

3.6 Geology, Soils, and Paleontological Resources

Impact GEO-1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving fault rupture	Less than significant	–	–
Impact GEO-2: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides	Less than significant	–	–
Impact GEO-3: Result in substantial soil erosion or the loss of topsoil	Less than significant	–	–
Impact GEO-4: Location on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide	Less than significant	–	–
Impact GEO-5: Location on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property	Less than significant	–	–

Impact	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
Impact GEO-6: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater	Less than significant	–	–
Impact GEO-7: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	Less than significant	–	–
3.7 Greenhouse Gas Emissions and Energy [Pending]			
3.8 Hazards and Hazardous Materials			
Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	Less than significant	–	–
Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	Less than significant	–	–
Impact HAZ-3: Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school	Less than significant	–	–
Impact HAZ-4: Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment	Less than significant	–	–
Impact HAZ-5: Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area	Less than significant	–	–
Impact HAZ-6: Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area	Less than significant	–	–
Impact HAZ-7: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	Less than significant	–	–

Impact	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
Impact HAZ-8: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands	Less than significant	–	–
3.9 Hydrology and Water Quality			
Impact HYD-1: Violate any water quality standards or waste discharge requirements	Less than significant	–	–
Impact HYD-2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)	Significant	No mitigation available	Significant and unavoidable
Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite	Less than significant	–	–
Impact HYD-4: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite	Less than significant	–	–
Impact HYD-5: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	Less than significant	–	–
Impact HYD-6: Otherwise substantially degrade water quality	Less than significant	–	–
Impact HYD-7: Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map	Less than significant	–	–
Impact HYD-8: Place within a 100-year flood hazard area structures that would impede or redirect flood flows	Less than significant	–	–

Impact	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
Impact HYD-9: Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam	Less than significant	–	–
Impact HYD-10: Contribute to inundation by seiche, tsunami, or mudflow	Less than significant	–	–
3.10 Land Use and Planning			
Impact LAN-1: Physically divide an established community	Less than significant	–	–
Impact LAN-2: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect	Less than significant	–	–
Impact LAN-3: Conflict with any applicable habitat conservation plan or natural community conservation plan	No impact	–	–
3.11 Mineral Resources			
Impact MIN-1: Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state	Beneficial impact	–	–
Impact MIN-2: Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan	Beneficial impact	–	–
3.12 Noise			
Impact NOI-1: Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies	Significant	No mitigation available	Significant and unavoidable
Impact NOI-2: Expose persons to or generate excessive groundborne vibration or groundborne noise levels	Less than significant	–	–
Impact NOI-3: Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project	Less than significant	–	–

Impact	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
Impact NOI-4: Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project	Less than significant	–	–
Impact NOI-5: Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels	Less than significant	–	–
Impact NOI-6: Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels	Less than significant	–	–
3.13 Population and Housing			
Impact POP-1: Induce substantial population growth, either directly, by proposing new homes and businesses, or indirectly, through the extension of roads and other infrastructure	Less than significant	–	–
Impact POP-2: Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere	Less than significant	–	–
Impact POP-3: Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere	Less than significant	–	–
3.14 Public Services			
Impact SER-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives: Fire protection	Less than significant	–	–
Impact SER-2: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives: Police protection	Less than significant	–	–

Impact	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
Impact SER-3: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives: Schools	Less than significant	–	–
Impact SER-4: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives: Parks	No impact	–	–
Impact SER-5: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives: Other public facilities	Less than significant	–	–
3.15 Recreation			
Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated	Significant	No mitigation available	Significant and unavoidable
Impact REC-2: Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment	Less than significant	–	–
3.16 Transportation and Traffic			
Impact TRA-1: Result in increased VMT on a per capita basis	Less than significant	–	–
Impact TRA-2: Result in traffic operations below LOS C for Stanislaus County roadways, which is the minimum acceptable threshold according to the General Plan	Less than significant (individual and cumulative)	–	–

Impact	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
Impact TRA-3: Result in traffic operations below the minimum acceptable thresholds on roadways outside Stanislaus County's jurisdiction (i.e., Caltrans facilities)	Significant	No mitigation available	Significant and unavoidable
Impact TRA-4: Create demand for public transit unable to be met by planned services and facilities or disrupt existing, or interfere with planned, transit services or facilities	Less than significant	–	–
Impact TRA-5: Disrupt existing, or interfere with planned, bicycle or pedestrian facilities	Less than significant	–	–
Impact TRA-6: Result in transportation network changes that would prevent the efficient movement of goods within the county	Less than significant (individual) Significant (cumulative)	– No mitigation available	– Significant and unavoidable
Impact TRA-7: Result in a change in air traffic patterns, including an increase in traffic levels or a change in location that results in substantial safety risks	Less than significant	–	–
Impact TRA-8: Create additional vehicle, bicycle, or pedestrian travel on roadways or other facilities that do not meet current county design standards	Significant	No mitigation available	Significant and unavoidable
Impact TRA-9: Substantially conflict with applicable plans, policies, and regulations of other agencies and jurisdictions where such conflict would result in an adverse physical change in the environment	Less than significant	–	–

Impact	Level of Significance before Mitigation	Mitigation Measure	Level of Significance after Mitigation
3.17 Utilities and Service Systems			
Impact UTL-1: Exceed wastewater treatment requirements of the Central Valley Regional Water Quality Control Board	Less than significant	-	-
Impact UTL-2: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	Significant	No mitigation available	Significant and unavoidable
Impact UTL-3: Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	Less than significant	-	-
Impact UTL-4: Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?	Less than significant	-	-
Impact UTL -5: Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments	Significant	No feasible mitigation available	Significant and unavoidable
Impact UTL-6: Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs	Less than significant	-	-
Impact UTL-7: Comply with federal, state, and local statutes and regulations related to solid waste	Less than significant	-	-

ES.4 Significant and Unavoidable Impacts

The Program EIR has identified the following areas where, after the implementation of feasible mitigation measures, the proposed project may nonetheless result in impacts that cannot be fully mitigated to a level of insignificance.

ES.4.1 Aesthetics, Light, and Glare

Development contemplated by the general plan would result in new development on undeveloped lands. This new development would irreversibly change the localized visual character of these areas and introduce new sources of light and glare, which may adversely impact the quality of daytime and night time views.

ES.4.2 Air Quality

Development and land use activities would result in emissions that would contribute to the region's air quality problem. The San Joaquin Valley Air Basin is in non-compliance for the emissions of ozone precursors and dust.

ES.4.3 Cultural Resources

Future development under the general plan, as amended by the project, will introduce new structures, roads, and other features that will adversely affect existing cultural resources.

ES.4.4 Hydrology and Water

Within the time frame of the general plan's 2035 planning horizon, development under the general plan will have a significant effect on groundwater overdraft. Although the general plan update includes measures intended to reduce or minimize this impact, those measures are reliant upon implementation of a groundwater sustainability plan that may not be fully implemented for decades.

ES.4.5 Noise

Noise impacts would be significant along numerous road segments where future noise levels would equal or exceed 60 L_{dn} and expose existing noise sensitive land uses to these higher levels. Mitigation of this impact would vary, depending on the level of noise, distance of the sensitive receptor from the road, and construction of the affected building. Based on the specific circumstances, methods of mitigation could include, but are not limited to, installation of a solid wall along the road frontage, retrofitting of existing buildings with double-pane windows, and installation of insulation in walls facing the road. The County does not have a program for mitigating noise impacts affecting existing sensitive receptors. This impact would be significant and unavoidable because there is no feasible program to mitigate the impact.

ES.4.6 Recreation

Future development under the general plan, as amended by the project, will increase demands on parks and may lead to the physical deterioration of those facilities. Further, the construction of regional parks often times results in significant effects from lighting and traffic.

ES.4.7 Transportation

Future growth anticipated by the general plan will result in greater traffic volumes on local and regional roadways (i.e., highways). The cumulative traffic generated by both cities and the County will cause some County and state roadways to operate at LOS E or F. Future development projects will be required to pay a traffic impact fee; however, it would not fully reduce the project's contribution to this significant impact to a less than considerable level. In addition, this will result in a considerably considerable contribution to a significant cumulative impact on goods movement.

Vehicle, bicycle, and/or pedestrian travel are anticipated to increase on roadways that do not currently meet county design standards with build-out of the General Plan, as amended by the General Plan update. Circulation Element Policies 1 and 2 and their appurtenant Implementation Measures, as amended by the General Plan update, will require applicants for development projects to identify and mitigate impacts on the transportation system, including upgrading the existing county road system as new development occurs and roadway network improvements are needed to accommodate increased travel demand. However, implementation of upgrades to the county roadway system may be limited by lack of funding sources.

ES.4.8 Utilities and Service Systems

Future development under the general plan, as amended by the project, will require the installation of new water and wastewater treatment facilities. Those facilities often result in significant effects on the environment. Existing water and wastewater treatment facilities in some rural communities are unable to serve anticipated future development. Funding to expand those facilities may not be available.

ES.5 Summary of Alternatives

CEQA requires the lead agency to consider a reasonable range of feasible alternatives to the proposed project that: (1) meet most or all of the project's objectives; (2) substantially reduce one or more of its significant effects; and (3) are potentially feasible. The County has examined two alternatives to the proposed project, including the No-Project alternative.

Below are very brief summaries of the alternatives that are examined in Chapter 4 of this EIR. See Chapter 4 for a more complete description of each of the alternatives and a qualitative comparison of their potential impacts. As authorized under Section 15126.6 of the State CEQA Guidelines, the alternatives are examined at a lesser level of detail than the proposed project. The alternatives are qualitatively compared to each other in Table ES-3.

Table ES-3. Summary of General Plan Alternatives Impacts

Impact Topic	Alternative 1— No Project		Alternative 2— Reduced Developable Area	
Aesthetics	SU	(S)	SU	(L)
Agricultural Resources	LTS	(S)	LTS	(L)
Air Quality	SU	(S)	SU	(L)
Biological Resources	SU	(S)	SU	(L)
Cultural Resources	SU	(S)	SU	(S)
Geology, Soils, and Paleontology	LTS	(S)	LTS	(S/L)
Greenhouse Gas Emissions and Energy	SU	(G)	SU	(L)
	LTS	(S)	LTS	(S)
Hazards and Hazardous Materials	SU	(S)	SU	(S)
			LTS	(S)
Hydrology and Water Quality	SU	(S)	SU	(L)
Land Use and Planning	LTS	(S)	LTS	(S)
Mineral Resources	LTS	(S)	LTS	(S)
Noise	SU	(S)	SU	(L)
Population and Housing	SU	(S)	SU	(G)
Public Services	SU	(S)	SU	(L)
Recreation	LTS	(S)	LTS	(S)
Transportation and Traffic	SU	(G)	SU	(L)
Utilities and Service Systems	SU	(S)	SU	(L)

(G) = impact greater than the project.
(L) = impact less than the project.
(S) = impact the same as the project.

ES.5.1 Alternative 1—No Project Alternative

Under Alternative 1—No Project Alternative, the current general plan would remain in effect and future development would occur in accordance with the land use map and policies of this plan. The County's future development would continue to be guided by the existing adopted plans and their policies. As with the project, there would be no site-specific changes in existing land use designations or zoning. Because the level and pattern of development would be substantially the same under both the project and the No Project Alternative, the key differences between the two are the proposed new goals, policies, and implementation measures being proposed by the project.

The No Project Alternative would not reduce any of the impacts attributed to the project.

ES.5.2 Alternative 2—Reduced Developable Area

This alternative would reduce the area of the county that is designated for residential or urban development. This would reduce the general plan's impacts on agricultural conversion, biological resources, and traffic. Those undeveloped or underdeveloped areas of the county with residential, commercial, and other urban planning designations include the communities of Del Rio, Denair, Diablo Grande, Keyes, Salida, and Westley. Measure E (enacted by voter initiative in 2008) requires

that any redesignation or rezoning of land in the unincorporated area from agricultural or open space use to a residential use must be approved by a majority vote of the county voters at a general or special local election. The planning strategies of the Stanislaus County General Plan must reflect the requirements of Measure E. The unincorporated communities of Crows Landing, Knights Ferry, and La Grange have little or no capacity for additional growth.

Under this initiative, the future development potential for the communities of Del Rio, Denair, Keyes, and Westley would be reduced. Both Diablo Grande and Salida are subject to approved entitlements that limit the County from “down zoning” them to reduce urban densities. Furthermore, the Salida Community Plan was adopted by voter initiative. As a result, it cannot be changed except by another popular vote at a county-wide election. The County cannot reduce development density within Salida through the general plan amendment process.

There are substantial undeveloped areas in Del Rio, Denair, Keyes, and Westley. Alternative 2 would include all of the proposed amendments to the General Plan and ALUCP, but would add new policies to each of these community plans to restrict new residential development projects on all vacant, agriculturally zoned lands to the residential use allowed in the particular agricultural zone. This would effectively preclude large scale residential subdivisions and limit development to single-family residences on lots meeting the minimum parcel size.

ES.6 Areas of Known Controversy and Issues to be Resolved

Pursuant to Section 15123 of the State CEQA Guidelines, the summary identifies areas of controversy known to the Lead Agency, including issues raised by agencies and the public. In addition, the summary section also identifies issues to be resolved. Each of these issues is discussed below.

A Notice of Preparation (NOP) for the Program EIR was distributed to the State Clearinghouse, responsible agencies, and other interested parties for a 30-day public review period from April 29, 2014 through May 29, 2014. In addition, public scoping workshops were held in Modesto, Patterson, and Oakdale.

A limited number of agencies, organizations, and individuals provided comments on the NOP. These comments suggested areas of study and identified environmental impacts.

ES.6.1 Areas of Known Controversy

No controversial issues were raised during the Notice of Preparation and scoping process of this project. However, the following are areas that have consistently been of concern to the public and decisionmakers.

ES.6.1.1 Agricultural Resources – Loss of Farmland

Development and land use activities contemplated by the general plan would potentially result in the loss of Important Farmland and Williamson Act land (much of it overlapping). The general plan encourages development to occur first in the cities and community plan areas. However, development would also be allowed on existing lots outside of these areas.

ES.6.1.2 Traffic Congestion

Future growth anticipated by the general plan, as well as city growth during the planning horizon, would result in additional vehicle trips on local and regional roadways. These additional vehicle trips may result in some roadways operating at levels that exceed the County's preferred standard of traffic flow, causing increased traffic congestion in the county.

ES.6.1.3 Water Supply

Stanislaus County has substantial existing water constraints. The major groundwater basins in the county are in a state of overdraft. Although initiatives are either underway (County groundwater "mining" ordinance adoption) or in the early planning stages (legislatively-mandated regional groundwater management plan) that would reduce this overdraft, the initiatives may not be sufficient to avoid continued overdraft and do not offer short-term relief. Given these constraints, future development and land use activities would further exacerbate these water-related problems without careful planning.

ES.6.2 Disagreement among Experts

The Program EIR contains substantial evidence to support the conclusions presented herein. However, there is the possibility that there will be disagreement among various parties regarding these conclusions. Both the State CEQA Guidelines and case law provide the standards for treating disagreement among experts. Where evidence and opinions conflict on an issue concerning the environment, and the lead agency knows of these controversies in advance, the Program EIR must acknowledge the controversies, summarize the conflicting opinions of the experts, and include sufficient information to allow the public and decision-makers to make an informed judgment about the environmental consequences of the proposed project.

Evidence presented during the public and agency review of the Draft Program EIR will be incorporated into the Final Program EIR for this project. In their proceedings, the decision-makers will consider comments received concerning the adequacy of the Draft Program EIR and address any objections raised in those comments. Decision-makers reviewing the Final Program EIR will have the ability to consider this material during the public hearing process.

ES.7 Public Review of the Draft Program EIR

The Draft Program EIR will be available for public review for the statutory 45-day public review period, beginning [date] and ending on [date]. During that time, agency representatives and members of public can submit written comments on the Draft Program EIR to the address provided below.

Ms. Kristin Doud, Associate Planner
Stanislaus County Planning and Community Development Department
1010 10th Street, Suite 3400
Modesto, CA 95354

After the end of the public review period and as part of preparing the Final Program EIR, the County will prepare written responses to all environmental issues that are raised by commenters. The Final Program EIR will consist of the Draft Program EIR, comments received, written responses to

comments, and list of commenters. It may also contain additional information necessary to respond to the comments. All public agencies that submit comments will be sent a copy of the County's response to their comment at least 10 days prior to the public hearing at which the Final Program EIR will be considered for approval by Board of Supervisors.

The Board of Supervisors will certify the Final Program EIR prior to taking separate actions on the proposed general plan and ALUCP. At that time, they will adopt findings regarding the disposition of each significant effect identified in the Final Program EIR, as well as a statement of overriding considerations describing the specific benefits that outweigh the projects significant and unavoidable impacts.

ES.8 Future Use of this Program EIR

After certification by the County Board of Supervisors, the Program EIR may be used by the County and other agencies as a "first tier" document for later actions, as authorized by Section 15183 (projects consistent with a community plan or zoning) or Section 15162 (subsequent EIR) of the State CEQA Guidelines (Title 14, California Code of Regulations, Section 15000, et seq.), as applicable. Under these provisions, later CEQA reviews would focus on the site-specific or project-specific impacts of that action. Reviews of later actions under this provision of CEQA would be required to consider any project-specific impacts that were not addressed in this Program EIR.

These later projects are not known at this time. However, they may include County actions such as the following.

- Rezoning undertaken to make zoning consistent with the general plan.
- Adoption of the Capital Infrastructure Financing Plans and similar infrastructure-related plans set out under the general plan, with the understanding that site-specific impacts will require additional CEQA analysis.

Tiering would not apply if the later action was not analyzed in the Program EIR.

1.1 California Environmental Quality Act

This environmental impact report (EIR) has been prepared according to California Environmental Quality Act (CEQA) California Resources Code Section 21000 et seq. and the Guidelines for the California Environmental Quality Act (California Code of Regulations [CCR], Title 14, Chapter 3). It evaluates the potential environmental impacts associated with the implementation of the proposed Stanislaus County General Plan update and Airport Land Use Compatibility Plan (ALUCP) update (together, “project”). Copies of the proposed draft general plan and Airport Land Use Compatibility Plan updates are located on the accompanying CD at the end of this EIR. The general plan update will apply to the county’s unincorporated areas, minus federal and state lands.

1.1.1 Purpose of the Environmental Impact Report

The purpose of this EIR is to inform County decision-makers, representatives of other affected/responsible agencies, the public, and other interested parties of the potential environmental effects that may be associated with the project, identify mitigation measures to reduce those effects, and analyze a range of alternatives to the project that would reduce one or more of its significant effects.

According to Section 15002 of the State CEQA Guidelines, the basic purposes of CEQA are as follows.

- Inform government decision-makers and the public about the potential significant environmental effects of proposed activities.
- Identify ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governing agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The process of preparing this EIR involved the following discrete steps.

- **Notice of Preparation (NOP).** Prior to preparing the Draft EIR, the County released an NOP to solicit the comments of public agencies and interested organizations and individuals regarding the scope and content of the EIR. The NOP was available for comment for at least 30 days. The NOP was distributed for this EIR on April 29, 2014, which included the 90-day review period for Tribal Contacts. The NOP is included in Appendix A of this EIR. An additional 90-day review period for the Board of Forestry was provided on August 18, 2015.
- **Community Meetings/Scoping Meeting.** Several community meetings were held to provide an overview and solicit comments regarding the proposed changes to the General Plan and ALUCP. Community meetings were held for the public on May 14, 2014 at Patterson City Hall in Patterson, and on May 22 at Gene Bianchi Community Center in Oakdale. A scoping meeting

offers additional opportunities for input prior to preparation of a draft EIR. Scoping meetings were held for public agencies and members of the public at Modesto Harvest Hall on May 19, 2014.

- **Preparation of the Draft EIR and Release for Public Review and Comment.** The Draft EIR will be available for 45 days for public agencies and interested organizations and individuals to review and prepare comments.
- **Preparation of the Final EIR.** The Final EIR will contain the Draft EIR, the comments received (and a list of commenters), written responses to the comments related to environmental issues, and any revisions that are made to the Draft EIR in response to the comments. The County Board of Supervisors will certify the Final EIR prior to taking action on the project.
- **Adoption of Findings and a Statement of Overriding Considerations.** The Board of Supervisors will adopt a set of “findings” that describe how each significant effect is being addressed. Because the general plan update will result in significant and unavoidable impacts, the County will also adopt a statement of overriding considerations that explains the specific benefits of adopting the project.

An EIR Is an Informational Document

Each of the following sections of the EIR addresses potential significant adverse environmental impacts associated with development pursuant to the project. Impacts are disclosed separately for development to the 2035 planning horizon. The potential impacts of the project are analyzed in comparison to existing conditions, except as noted.

When determining whether the project would result in a significant environmental impact, the EIR also considers the extent to which proposed plan policies would act to reduce its effects. Where the plans’ policies would not be sufficient to reduce impacts to a less-than-significant level and there is feasible mitigation that would do so, the EIR identifies that mitigation. For purposes of this EIR, “mitigation” means specific policies that can be adopted that would avoid the impact or reduce it to a less-than-significant level.

The EIR Neither Approves nor Denies the Plans

The Stanislaus County Planning Commission and Board of Supervisors will use the EIR to inform themselves of the impacts of the proposed project before taking action on the project. They will also consider other information and testimony submitted during deliberations on the project. After weighing this information, they will then make their decisions.

Environmental impacts cannot always be mitigated to a level that is considered less than significant. In accordance with Section 15093(b) of the State CEQA Guidelines, if an agency approves a project that has significant impacts that cannot be mitigated (i.e., significant and unavoidable impacts), the agency cannot approve the project without specifying in writing the project benefits that justify its approval. Because a county general plan identifies land uses for an entire county, most general plan EIRs identify significant and unavoidable impacts. This EIR is no exception. As mentioned above, prior to approving the project in final form, the County will adopt a statement of overriding considerations that describes the specific benefits that outweigh the significant and unavoidable impacts of the project.

1.1.2 Program EIR

The most common type of EIR, the “project EIR,” analyzes the impacts of an individual activity or specific project. Like all EIRs, it must include the contents required by CEQA and the corresponding State CEQA Guidelines. Project EIRs are generally prepared for specific site-development projects, such as subdivisions or commercial centers.

Where the project consists of a series of actions or activities, a “Program EIR” can be prepared (State CEQA Guidelines Section 15168). Once it is adopted, a Program EIR will be used to streamline the later environmental analysis of these activities. Typically, because not all of the components of the program are known in detail, this means a Program EIR will not be detailed enough to analyze all aspects of the later activities. If the later proposal would have effects that were not analyzed in the Program EIR or is an activity not included in the Program EIR, either a new EIR or a new Negative Declaration would be prepared in order to analyze that project.

On the other hand, if the agency finds that no new or more severe effects could occur that had not been analyzed in the Program EIR, the agency can approve the activity as being within the scope of the activities described in and analyzed by the Program EIR and no new environmental document would be required. If a specific project is within the scope of the Program EIR, but would result in a new or more severe impact, then a subsequent or supplemental EIR or Mitigated Negative Declaration would be prepared. It would focus its analysis on the new or more severe effects.

The “program” being analyzed in this Program EIR is the updates to the Stanislaus County General Plan and the ALUCP.

1.1.3 Level of Detail

This EIR considers the potential environmental effects of implementing the plan updates. The State CEQA Guidelines provide that “[t]he degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity which is described in the EIR” (Section 15146). The general plan and ALUCP are broad statements of policies. They do not propose any specific development project. Accordingly, this EIR “need not be as detailed as an EIR on ... specific construction projects” (State CEQA Guidelines Section 15146). Further actions or procedures necessary to implement the updated general plan and ALUCP will include the processing of zoning plans, specific plans, tentative tract maps, site design plans, building permits, and/or grading permits. Because those site-specific and project-specific actions are separate from updating the general plan and ALUCP, they are not analyzed in this EIR.

To keep the analysis of impacts in this Program EIR in perspective, the county contains an area of approximately 1,521 square miles. It includes well-established, unincorporated communities of varying sizes and development intensity (the county also contains nine incorporated cities that are outside of its jurisdiction). The county has an extensive array of agricultural lands, lands devoted to mineral extraction, and recreational areas. There are foothills, valley areas, and expansive natural open space areas. The analysis in an EIR for a county this size is not intended to be site-specific, but is a broad analysis. For instance, the traffic analysis determines on a gross level whether development under the general plan will result in traffic congestion and where that would generally occur. It cannot, however, determine the specific street improvements that individual future projects might need in order to avoid their site-specific impacts on the traffic system.

1.2 Intended Use of the Environmental Impact Report

This EIR is prepared for the purpose of analyzing, at a broad scale, the environmental impacts of the proposed plan updates. Accordingly, this EIR does not take a parcel-specific view or provide a parcel-specific analysis of potential impacts.

The following discretionary actions are anticipated to be taken by Stanislaus County based on this EIR.

- Adoption of the Stanislaus County General Plan updates
- Adoption of the Stanislaus County ALUCP updates

1.2.1 General Plan Adoption

Final adoption of the plan updates is the responsibility of the County Board of Supervisors. The proposed project will first be considered by the County Planning Commission, which will offer its recommendations to the Board for final action. Public hearings will be part of both the Planning Commission and Board deliberations.

Prior to considering the general plan, the County has contacted Native American tribes to solicit their opinions, as provided by Senate Bill (SB) 18 (Chapter 905, Statutes of 2004). The County has also consulted with state and local agencies through the CEQA process. A list of the extensive contacts made during the consultation period is available upon request to the Stanislaus County Planning Department.

1.2.2 Future Use of this EIR

After certification by the County Board of Supervisors, this EIR may be used by the County and other agencies as a “first tier” document for later projects, as authorized by Section 15183 (projects consistent with a community plan or zoning) and Section 15168 (program EIR) of the State CEQA Guidelines (14 CCR 15000 et seq.). As the first tier document, the EIR would be the foundation for later CEQA reviews. Reviews of later proposals under this provision of CEQA would be required to consider any project-specific impacts that were not addressed in this EIR.

These later projects are not known at this time. However, they may include County actions such as these.

- Rezoning undertaken to make zoning consistent with the updated general plan.
- Adoption of the Capital Infrastructure Financing Plans and similar infrastructure-related plans, with the understanding that site-specific impacts will require additional CEQA analysis.

Other agencies may also utilize this EIR for their decisions. The extent to which the EIR is relied upon will depend upon whether the actions are consistent with the general plan, whether there are new project-specific impacts requiring additional CEQA review, and whether the other agency chooses to use the EIR. There are no such proposed actions by other agencies currently known.

1.3 Environmental Impact Report Focus

The EIR addresses a comprehensive set of environmental topics. Because the project does not include any proposed site-specific changes in land use designations, the focus is on the prospective environmental impacts of the proposed changes in general plan and ALUCP policies.

1.4 Document Format

This Program EIR is organized into the following sections.

- **Executive Summary** consists of an overview of the contents and findings contained in this document. It also contains a brief description of the proposed project, the alternatives, areas of known controversy, and summary tables listing all project impacts and comparing alternatives.
- **Chapter 1** is the introduction and describes this EIR's purpose and legal requirements, as well as its intended use. It contains an outline of the document and a list of the environmental issues that are discussed in this EIR.
- **Chapter 2** is the project description and describes the plans and their objectives. A full description of the proposed general plan and ALUCP updates is included in Appendix B of this EIR.
- **Chapter 3** contains the environmental analysis of the project, by environmental topic. The existing setting, thresholds of significance, impacts, and mitigation measures for each environmental topic listed below is presented according to the following framework.
 - 3.1 – Aesthetics
 - 3.2 – Agricultural Resources
 - 3.3 – Air Quality
 - 3.4 – Biological Resources
 - 3.5 – Cultural Resources
 - 3.6 – Geology, Soils, and Paleontological Resources
 - 3.7 – Greenhouse Gas Emissions and Energy
 - 3.8 – Hazards and Hazardous Materials
 - 3.9 – Hydrology and Water Quality
 - 3.10 – Land Use and Planning
 - 3.11 – Mineral Resources
 - 3.12 – Noise
 - 3.13 – Population and Housing
 - 3.14 – Public Services
 - 3.15 – Recreation

- 3.16 – Transportation and Traffic
- 3.17 – Utilities and Service Systems
- **Chapter 4** presents the alternatives to development of the plans. As allowed by CEQA, most of the impacts of these alternatives are evaluated at a more general level than the analyses contained in Chapter 3.
- **Chapter 5** contains discussions of additional topics required by CEQA, including unavoidable effects of the plans, significant irreversible environmental changes, growth-inducing impacts, cumulative impacts, and consistency with regional plans.
- **Chapter 6** lists the organizations and persons consulted in preparation of the EIR.
- **Chapter 7** identifies the people who prepared the EIR.
- The Appendices contain copies of the NOP, the texts of the proposed general plan and ALUCP updates, and technical information.

1.5 Approach to the Impact Analysis

The State encourages jurisdictions to revise their general plans periodically. Typically, general plans are comprehensively updated every 10 years and the typical planning horizon for general plans is 20 years into the future. Here, the update includes a planning horizon of 2035.

The analysis relies on reasonable growth projections prepared by the Stanislaus Council of Governments (StanCOG) for the 2014 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). These projections extend to the year 2040.

The impacts of the general plan as amended by the project and the ALUCP update are measured by comparison to existing conditions. For purposes of this EIR, existing conditions are 2010, in keeping with the StanCOG growth projections.

This EIR undertakes a good faith effort at evaluating the future impacts of the project, without straying into speculation. The horizon for this analysis is 2035.

2.1 Background

As a requirement of California Government Code Section 65300, every city and county throughout California must develop and adopt “a comprehensive, long-term general plan to guide its development” (Government Code Section 65300). A general plan must include seven mandatory elements: Land Use, Circulation, Housing, Open Space, Conservation, Safety, and Noise. Although they are listed separately in California law, the general plan elements comprise an “integrated, internally consistent and compatible” set of policy objectives. Cities and counties commonly combine the seven elements into their own unique general plans. Each jurisdiction may also include additional elements.

The general plan has been called a “constitution for development” because it establishes the county or city goals, objectives, and policies that will guide growth, resource conservation, resource use, and public safety decisions. A general plan’s land use map lays out the future pattern of land uses within the jurisdiction, including housing, commercial, office, industrial, agricultural, resource recovery, open space, and agriculture. A general plan’s overall goals, objectives, and policies, and those policies related to the various types of land uses are implemented through the zoning and subdivision ordinances, and the adoption of specific plans.

The California State Aeronautics Act (California Public Utilities Code Sections 21670–21679.5) requires, with limited exceptions, the creation of an Airport Land Use Commission (ALUC) in each county that has a public-use or military airport. The ALUC is required to prepare an Airport Land Use Compatibility Plan (ALUCP) to address each public-use and military airport. According to the act, the purpose of an ALUCP is “to protect public health and safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public’s exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses.” An ALUCP must reflect the anticipated growth of an airport for at least 20 years based on a long-range master plan or airport layout plan. Each ALUCP includes policies to prevent conflicts between planned airport development and proposed land uses within the “Airport Influence Area” identified in the compatibility plan.

After an ALUCP has been adopted, its policies must be implemented by the affected local agencies. Government Code Section 65302.3 establishes that each county and city affected by an ALUCP must make its general plan and any applicable specific plans consistent with the ALUC’s adopted compatibility plan. Alternatively, a local agency may, after a public hearing, overrule the ALUC’s findings by a two-thirds vote of its governing body if it makes specific findings that the proposed action is consistent with the purposes of California Public Utilities Code Section 21670 et seq.

Local agencies are also responsible for referring their plans and certain other proposed land use actions to the ALUC for review. The ALUC must determine whether the proposed plans or land use actions are consistent with the ALUCP. The proposed adoption or amendment of general plans, specific plans, zoning ordinances, and building regulations always must be referred to the ALUC. However, other actions, such as those associated with individual development proposals, are subject to ALUC review only until the time that the general plan or specific plan of a local agency has been

made consistent with the ALUCP or the agency has overruled the ALUC. Similarly, any proposed modification to an airport master plan or airport layout plan must be referred to the ALUC to determine if the proposal is consistent with the adopted ALUCP.

2.2 Project

The project analyzed in this Program EIR consists of two components: an update to the Stanislaus County General Plan and updating the county-wide ALUCP to include revised plans for the Modesto City/County Airport and the Oakdale Municipal Airport. These are separate actions, although the plans are being prepared at the same time. The components of the project are summarized below.

2.2.1 Stanislaus County General Plan Update

Stanislaus County's general plan is comprised of the mandatory elements and one optional element, the Agricultural Element. The County has combined the required Open Space and Conservation Elements due to their interrelated content. The last broad-based update to the County general plan was adopted in 1994.

Stanislaus County's general plan applies to the unincorporated areas of the county. It does not apply to the incorporated cities, which have their own general plans, nor to state, tribal, or federal lands.

Stanislaus County is located in the San Joaquin Valley, in the heart of California's Central Valley (Figure 2-1). The county is bordered by the Coastal Mountain Range to the west and the Sierra Nevada Mountains to the east. It spans nearly 1,500 square miles and has approximately 514,000 residents (2010 Census) in its nine cities and unincorporated communities. Two of California's major north-south transportation routes, Interstate 5 (I-5) and State Route 99 (SR-99), cross the county. The Tuolumne River, Dry Creek, and the Stanislaus River run through the county from east to west and the San Joaquin River runs through the county from north to south.

Purpose of the General Plan Update

Stanislaus County proposes to update several elements of the general plan. Maps throughout the general plan have been updated; however, no changes in land use designations are proposed. The update of the general plan incorporates changes that have occurred in terms of legislation, regulatory codes, and local standards. Support documentation has been incorporated into each element. The update also includes some minor revisions to general plan language and some policy improvements. The general plan's 20-year planning horizon will be extended to 2035 by this update. The update integrates the population projections adopted by StanCOG's 2014 Regional Transportation Plan/Sustainable Communities Strategy into the general plan.

The 2014 General Plan Update includes revisions that recognize the following state legislation enacted since the last update to the general plan.

- 2003 Assembly Bill (AB) 170 – Air Quality and Land Use
- 2003 AB 32 – Greenhouse Gas Reduction
- 2007 SB 375 – Sustainable Communities Strategy
- 2007 AB 162/SB/AB 5 – 200 Year Flood Plain Protection

- 2011 AB 359 – Groundwater Recharge Mapping
- 2011 SB 244 – Disadvantaged Communities
- 2011 AB 26 – Dissolution of Redevelopment Agencies
- 2012 SB 1241 – Safety Element and Fire Hazard Impacts
- 2014 AB 1739 – Groundwater Management
- 2015 AB 52 – Protections for Tribal Cultural and Archaeological Resources

The general plan has also been updated to incorporate changes to agency names, structures, and responsibilities; changes to local codes, standards, and management plans; minor language and formatting revisions; and ALUCP consistency. This includes updating the lists of departments responsible for implementing the general plan found in many of implementation measures.

General Plan Update Objectives

The 2014 General Plan Update seeks to achieve the following essential objectives.

- To comprehensively review and amend the general plan to incorporate current requirements of State law related to planning issues.
- To update existing and incorporate new goals, objectives, policies, and implementation measures to reflect local changes in land use policy.
- To update technical data found within the general plan and support documents.
- To update the ALUCP to ensure consistency with the general plan; incorporate the requirements of the California Department of Transportation's (Caltrans') *Airport Land Use Planning Handbook*; and reflect new information relating to noise contours, safety zones, airspace protection zones, overflight areas, and current city general plan provisions.
- To prepare the environmental documentation necessary to support adoption of the general plan update and ALUCP update.
- To make these revisions while limiting changes to the land use diagram to a minimum.

Airport Land Use Compatibility Plan Objectives

The proposed ALUCP has the following objectives:

- To update the ALUCP to ensure consistency with the general plan; incorporate the requirements of the California Department of Transportation's (Caltrans') *Airport Land Use Planning Handbook*; and reflect new information relating to noise contours, safety zones, airspace protection zones, overflight areas, and current city general plan provisions
- To prepare the environmental documentation necessary to support adoption of the general plan update and ALUCP
- Provide for the orderly growth of each public airport and the area surrounding the airport to safeguard the general welfare of the inhabitants near the airport and the public in general.
- Establish height restrictions on buildings, specifies use of land within its planning areas, and determine building standards, including soundproofing adjacent to airports, within the airport influence area to limit impacts on residents near the airports.

- Control new development near airports in order to minimize conflicts between the airport and that development.

Summary of the Proposed General Plan Changes

Below is a summary of the changes that have been incorporated into the 2014 General Plan Update. The 2014 General Plan Update consists of revisions to the following elements and the ALUCP.

- Land Use
- Circulation
- Conservation/Open Space
- Noise
- Agricultural
- Safety

The current Housing Element (adopted in 1992) was last updated in 2012 and is currently in the process of being updated through a separate process. This element is not proposed for change as part of the general plan update and will be updated separately at some later date.

Land Use Element

A number of changes in the Land Use Element centering on unincorporated communities have been proposed.

- Updating the language within the Land Use Element to reflect the elimination of redevelopment agencies. The general plan will still utilize the word “redevelopment.” However, it will be used in the context of renovations or updates occurring within existing development, not to Redevelopment Agency activity. (Goal One, Policy Six, Implementation Measures 1 and 2)
- Eliminating the reference to the Urban Services (US) zoning district in the implementation measure on rezonings within the sphere of influence of a community services district, sanitary district, or domestic water district. This implementation measure would instead provide that land within the sphere of influence of a community services district, sanitary district, or domestic water district shall be rezoned for development only if capacity for connecting to available public services exists and any resulting projects are conditioned to require connection to available services. (Goal One, Policy Six, Implementation Measure 3)
- Adding policy language requiring that, when feasible, new development 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. (Goal One, Policy Six, Implementation Measure 4)
- Adding language to Goal One, Policy Six, Implementation Measure 5, to encourage unincorporated communities to establish “self-help” programs (such as benefit assessment districts).
- Including in Goal One, Policy Six an assessment of the infrastructure needs of “disadvantaged communities.” (new Implementation Measure 6)

- Clarifying that all requests for development that require discretionary approval and include lands adjacent to or within riparian habitat shall include measures for protecting that habitat to the extent that such protection does not pose threats to proposed site uses, such as airports. (Goal One, Policy Seven, Implementation Measure 1)
- Adding measures to support economic development and job creation within the county. (Goal Three, Policy Seventeen, Implementation Measures 1–3)
- Encouraging reuse of the Crows Landing Air Facility as a regional jobs center. (Goal Three, Policy Seventeen, Implementation Measure 9)
- Adding Goal Two, Policy Sixteen and Implementation Measures 1 and 2 to reduce impacts associated with artificial lighting.
- Adding a new policy supporting efforts to direct economic development and job creation centers towards incorporated areas, the County shall also consider approval of centers in unincorporated areas of unique character and proximity to transportation infrastructure. (Goal Three, Policy Twenty-Two, Implementation Measure 1, and Goal Six, Policy Thirty-One).
- Adding an implementation measure such that development within a public water district and/or waste water district shall connect to the public water system and/or the waste water treatment facility; except where capacity is limited or connection to existing infrastructure is limiting and an alternative is approved by the County's Department of Environmental Resources. For development outside a water and/or waste water district, it shall meet the standards 1–12 of the Stanislaus County Primary and Secondary Sewage Treatment Initiative (Measure X) and domestic water. (Goal Four, Policy Twenty-Four, Implementation Measure 2)
- Amending Goal Four, Policy Twenty-Four, Implementation Measure 6 to provide that rezoning of property for development prior to: (1) annexation to a special district or (2) inclusion of such property into a newly formed special district that will provide urban services (i.e., sanitary sewer district, domestic water district, or community service district), which 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.
- Adding an implementation measure to allow the County to amend its ordinances to implement any specific designation created by agreement with a City within a sphere of influence (Goal Five, Policy Twenty-Six, Implementation Measure 6).
- Enhancing policies about complementing the general plans of cities within the county. Coordination with cities is encouraged in order to identify opportunities to develop uniform development standards in city spheres of influence and along all major County-defined gateways to cities. An implementation measure has been added that will require development projects that require discretionary approval and are located outside the sphere of influence of cities, but within 1 mile of a city's adopted sphere of influence boundary and within a city's adopted general plan area, to be referred to that city for consideration. However, the County reserves the right of final discretionary action and authority. (Goal Five, Policy Twenty-Seven, Implementation Measures 1–3)
- Adding a policy expressing the County's support for a county-wide growth management strategy that is equitable to the needs of the county and all nine cities, taking in consideration land consumption and absorption rates. (Goal Six, Policy Twenty-Eight, Implementation Measures 1–2)

- Adding a new goal and related policies regarding healthy living environments for county residents. Recent environmental legislative changes led to the creation of a new goal to promote and protect healthy living environments and to encourage development that results in the following (Goal Six, Policies Twenty-Nine through Thirty-One).
 - Decreases air and water pollution.
 - Reduces the consumption of natural resources and energy.
 - Increases the reliability of local water supplies.
 - Facilitates alternative modes of transportation.
 - Promotes active living.
 - Improves 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. (Goal Six, Policies Twenty-Seven through Twenty-Nine)
- Revising the portion of the “Background” section of the element regarding Spheres of Influence.
- Amending the “Commercial” general plan designation to allow residential development in limited situations or when connected to both public sewer and water service.
- Amending the general policy statement regarding “Community Plans” to specify that any requests for rezoning within a Community Plan area must be consistent with the proposed use category of the Community Plan and shall be processed as a general plan amendment.
- Adding clarifying language to the Salida Community Plan section to differentiate the “Existing Plan” from the “Amendment Area,” to specify the date of adoption of the Amended Area, to clarify the process for making amendments to the Salida Initiative and to the term limit of the Initiative.
- Revising information in the Public Services and Facilities section to clarify the current status of educational facilities, special education, and enrollment in the County.
- Making minor revisions to the Liquid and Solid Waste Disposal Facilities section regarding location and status of the 11 permitted solid waste facilities in the County.

Circulation Element

The Circulation Element would be amended to include new “Road Classifications” consistent with the U.S. Department of Transportation, Federal Highway Administration’s (FHWA) naming standards and to incorporate changes to the right-of-way standards to allow Public Works more discretion in whether or not right-of-way needs to be obtained. The new road classifications include Interstate Freeway, Freeway and Expressway, Principal Arterials (Rural and Urban), Minor Arterial (Rural and Urban), Major Collector (Rural, Urban & Industrial), Minor Collector (Rural, Urban, & Industrial), Rural Local, and Urban Local. These would take the place of the current road classifications such as Freeway, Expressways, Major Road, and Collector.

The amendment includes a new Table 2-1, establishing road standards by classification, as follows.

Proposed New General Plan Table 2-1. Minimum Right-of-Way Requirements and Roadway Segment Level of Service Criteria

Street Classification	Total Lanes	Level of Service Thresholds (vehicles/per day/per lane)				
		A	B	C	D	E
Urban						
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
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
Industrial						
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
Rural						
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

Level of service (LOS) is a standard measure of traffic congestion along a roadway or at an intersection for vehicles. It ranges from A to F, with LOS A representing free flow and LOS F representing extreme congestion.

The proposal would amend the County's LOS standard from LOS C to LOS D for all county roadway segments and establish LOS C as the standard for motorized vehicles at all roadway intersections. LOS C represents conditions where traffic can move relatively freely on segments and through intersections. LOS D represents conditions where delay is more noticeable and average travel speeds are more unstable.

Policies have also been added to encourage development with multiple points of ingress and egress to aid in traffic flow and pedestrian accessibility, to encourage alternatives to onsite parking standards, and to encourage development that provides a safe, comprehensive, and coordinated transportation system that includes a broad range of transportation modes.

The project would update the minimum right-of-way and roadway segment LOS requirements for land dedication. In addition, the segment of Dunton Road from Milton Road to Highway 4 has been removed from the list of rural local or rural minor collector roads requiring at least 80 feet of right-of-way. Proposed new Table 2-3 would describe the preferred characteristics of county roads, by classification. Existing Table 2-3 showing Adopted Plan Lines has been renumbered Table 2-4 and many of the Adopted Plan Lines have been deleted from the Circulation Element.

Proposed new Table 2-3 and revised new Table 2-4 are shown below.

Proposed New General Plan Table 2-3. Functional Classifications – Desired Roadway Characteristics

Functional Classification	Corridor Width (feet) ^a	Lanes ^b	LOS Threshold ^c	Intersecting Roadways ^d	Private Property Access ^e	Mobility/ Operating Speed ^f
Urban						
Freeway/ Expressway	Varies	4–8	D	Interchange at 1 mile spacing	None	High
Principal Arterial	110–135	4–6	D	1 per 1/2 mile	Very Limited	High
Minor Arterial	110–135	4–6	D	1 per 1/2 mile	Limited	Medium-High
Major Collector	80–110	2–4	D	1 per 1/4 mile	Limited	Medium
Minor Collector	60–70	2	D	1 per 1/8 mile	Limited	Low-Medium
Local/Private	50	2	D	No Limit	Controlled	Low
Rural						
Freeway/ Expressway	Varies	4–8	D	Interchange at 2 mile spacing	None	High
Principal Arterial	110–135	4–6	C	1 per 1/2 mile	Very Limited	High
Minor Arterial	110–135	2–4	C	1 per 1/2 mile	Limited	Medium-High
Major Collector	80–110	2–4	C	1 per 1/4 mile	Limited	Medium-High
Minor Collector	60–70	2	C	1 per 1/4 mile	Limited	Medium-High
Local/Private	50–60	2	C	1 per 1/4 mile	Controlled	Low-High

^a 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 may be necessary at approaches to intersections to accommodate turn pockets. See Table 2-3 for Minor Collector and Local Roads that will require additional right-of-way.

^b 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.

^c The LOS thresholds indicated in this table represents the maximum acceptable weekday AM or PM Peak Hour LOS. Whenever a traffic analysis is prepared as part of a project approval, improvements need to be identified to ensure the resulting operating LOS does not exceed these threshold values.

^d 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.

^e 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 roads 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.

^f 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.

Proposed New General Plan Table 2-4. Adopted 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

Several Special Study Areas are being removed from the general plan, as listed below.

- Las Palmas Bypass
- SE Turlock Interchange
- Washington Road Extension
- Dakota Avenue/Service Road (Tuolumne River Crossing)
- Briggsmore Avenue Extension
- SR-99/Kiernan Avenue
- SR-99/Hammett Road

The Special Study Areas to be included in the new Circulation Element are as follows.

- South County Corridor (new study area)
- North County Transportation Corridor
- SR 132 Realignment and Widening
- Claus/Garner/Faith Home Expressway

The amendment would remove the description of Scenic Highways from the Circulation Element. That conforms the General plan to California Planning Law, which no longer mandates a scenic highways element.

Other modifications to the descriptions of various forms of transportation in the Circulation Element are as follows.

- Updating census information.
- Revising the Public Transit section to better describe StaRT.
- Adding discussions of the California High-Speed Rail project and the Altamont Commuter Express service to the Bay Area.
- Adding a brief description of the benefits of Intermodal Facilities for freight and passengers.

- Updating the aviation section discussion of the former Crows Landing Air Facility and Air Field.
- Expanding the discussion of transportation impact studies to require that all modes of transportation be considered in these studies, including operational and safety impacts of vehicle traffic, bicycle/pedestrian traffic, and transit systems. Impacts would be required to be mitigated with appropriate improvements to minimize the impacts of the proposed development. This discussion explains that the County will continue to use LOS to evaluate the impacts of new development on the transportation system, although LOS will no longer be used to determine environmental significance, in accordance with 2013 amendments to CEQA (SB 743, Chapter 386, Stats of 2013).

The language of Goal One has been revised to provide for and maintain a transportation system for the movement of people and goods that also meets land use and safety needs of all modes of transportation. Updates under Policy One of this goal include adding references to safety, updating references to specific dates, revising the departments responsible for policy implementation, and including non-motorized roadway elements when discussing roadway improvements. In addition, the measure that requires preparation of traffic impact studies has been broadened to include all projects, not just large ones.

Goal One, Policy One implementation measures would include language clarifying that new development will be required to pay for its operations and safety impacts on county roads, including improvements for non-motorized modes of travel.

Goal One, Policy Two states that circulation systems shall be designed and maintained to promote safety by combining multiple modes of transportation into a single, cohesive system. Four new implementation measures being proposed under this policy would limit the number of egress points onto public roads by including shared driveways and access easements at adjacent parcels; promote open street patterns with multiple points of ingress and egress to facilitate emergency response, minimize traffic congestion, and facilitate use by diverse modes of transportation; promote the transformation of major transportation corridors into boulevards that are attractive, comfortable, and safe for pedestrians; and require a new strategic plan to be prepared that includes the identification of areas and/or projects to which new multi-modal transportation guidelines would apply. The new guidelines (which are not part of the general plan update) would identify strategies for creating communities that increase the convenience, safety, and comfort of people using bicycle, pedestrian, and public transit facilities.

Policy Four Implementation Measures 2 (preparation of annual cumulative traffic impact analysis for general plan amendments) and 3 (development of traffic impact study procedures) would be removed from the general plan. Implementation Measure 1 would be expanded to confirm the County's reliance on the Congestion Management Program, including non-motorized alternatives (bicycle and pedestrian) and smart growth alternative land use strategies as alternatives to manage congestion. A new Implementation Measure 2 would be added stating that transportation facilities will provide for current and future transportation needs to protect public health, safety and welfare.

Policy Six would be revised to strive to reduce overall vehicle miles traveled instead of vehicle trips. Aviation has been added to the list of facilities to support the use of alternative modes of transportation in new development. Implementation Measure 4 (preparation of trip reduction/travel demand ordinance) would be dropped from the general plan. The implementation measure requiring the County to convert its vehicle fleet to clean fuels would be revised to continue

using Compressed Natural Gas or another alternative energy source in its fleet vehicles and County-owned buses.

Under Policy Seven, Implementation Measures 5 (creating a bicycle master plan) and 9 (creating pedestrian-oriented design guidelines) would be deleted from the general plan. The bicycle master plan has been replaced by the County's adopted *Non-Motorized Transportation Plan*, and Implementation Measure 1 would be amended to reflect that fact.

There are several changes and new implementation measures proposed under Policy Eight, which promote public transit. These changes would include the following.

- Revising Implementation Measure 1 to encompass all transit systems, as opposed to just the inter-city transit system, and requiring coordination with other County transit operators.
- Revising Implementation Measure 2 to work with 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.
- Expanding Implementation Measure 4 from requiring bus turnouts and shelters and park-and-ride lots, to promoting coordination and continuity of all transportation modes and facilities, including park-and-ride facilities at major activity centers.
- Deleting existing Implementation Measure 5 relating to transit-oriented development design guidelines.
- Adding a new Implementation Measure 5 that would ensure new development projects will include bus turnouts and site improvements associated with bus stop accessibility for persons with disabilities, including curb cuts for wheelchair access.
- Adding a new Implementation Measure 6 that would call for coordination between 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.
- Adding a new Implementation Measure 8 encouraging infill development of vacant parcels and redevelopment projects that will align with and improve the overall effectiveness of the public transit system
- Adding a new Implementation Measure 9 to 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 would be interconnected to support increased ridership.

Under Policy Nine, Implementation Measure 7, regarding coordination with other agencies to designate SR-99 as part of the Federal Interstate System, would be deleted. This measure is obsolete because the designation of SR-99 as part of the system would require improvements that are too costly, and regional efforts to pursue this status have been abandoned.

A new goal and related policies concerning parking improvements would be added. The new policies would seek to reduce the amount of land dedicated to parking and make alternative modes of transportation more accessible. New implementation measures would call for updating the parking ordinance to allow more flexibility in usage of on-street parking and the use of shared parking facilities, and 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.

Conservation/Open Space Element

The Conservation/Open Space Element is being updated to ensure consistency between the general plan and the capital improvement plan, hazard mitigation plans, and the ALUCP (specifically to reduce potential conflicts between habitat areas and Airport Influence Areas [AIAs]). Several changes regarding AIAs are proposed.

- A new implementation measure that requires ALUC review of the location, compatibility, and design of proposed parks, open space uses, and outdoor recreation areas within adopted AIAs (Goal One, Policy Two, Implementation Measure 3).
- A new implementation measure that discourages the establishment of conservation areas or nature preserves within adopted AIAs (Goal One, Policy Two, Implementation Measure 4).
- A new implementation measure ensuring that all projects within an adopted AIA that have the potential to create habitat, habitat conservation, or species protection shall be reviewed by the ALUC (Goal One, Policy Three, Implementation Measure 4).
- A new implementation measure that requires proposals that establish new or expanded recreational areas be reviewed for consistency with the Safety Element when located within an AIA. (Goal Four, Policy Fifteen, Implementation Measure 5)

New implementation measures have also been added to encourage the establishment of scenic corridors, riparian habitat and vernal pools mitigation, and landfill waste material diversion.

- A new implementation measure to consider adoption of scenic corridors to protect and preserve natural scenic vistas located throughout the county. (Goal One, Policy Two, Implementation Measure 5)
- A new implementation measure to include habitat protection mitigation measures where ground-disturbing activities will potentially impact undisturbed riparian habitat and/or vernal pools or other sensitive areas. (Goal One, Policy Three, Implementation Measure 6)

Revisions are proposed to Goal Two, Policy Eight to redirect its emphasis from water monitoring to water management. Additional revisions reflect state groundwater planning requirements under Assembly Bill 1739 (Chapter 347, Statutes of 2014). The proposed changes include the following.

- Revising policy language to reflect that state and federal funding options will be pursued to improve water quality management resources.
- Revising policy language to clarify that public water systems under the Department of Environmental Resources should be monitored.
- A new implementation measure to coordinate with water purveyors, private landowners, and other water resource agencies to collect data, develop a groundwater usage tracking system, and monitor groundwater level in order to help guide future policy development (Goal Two, Policy Eight, Implementation Measure 3).
- A new implementation measure to promote efforts to increase reliability of groundwater supplies through a variety of tools such as reuse opportunities and public education, as well as expanded opportunities for conjunctive use of groundwater (Goal Two, Policy Eight, Implementation Measure 4).
- A new implementation measure to create a new water resources management plan (Goal Two, Policy Eight, Implementation Measure 5).

- A new implementation measure to prepare and adopt a groundwater sustainability plan pursuant to AB 1739, in cooperation with other pertinent agencies such as cities and water districts (Goal Two, Policy Eight, Implementation Measure 6).
- A new implementation measure to develop planning and policy needs to improve groundwater recharge opportunities and groundwater conditions in the county (Goal Two, Policy Eight, Implementation Measure 7).
- A new implementation measure to adopt General Plan amendments to protect groundwater recharge areas and manage land use changes that would have an impact on groundwater use and quality, as information becomes available (Goal Two, Policy Eight, Implementation Measure 8).

Several changes have been made under Goal Three, Policy Ten, which provides for long-term conservation and use of agricultural lands. These changes include minor text changes to clarify that the County will continue to participate in the Williamson Act and Farmland Mapping and Monitoring Program. Implementation Measure 4, encouraging clustering of dwelling units on small parcels in designated agricultural land, will be removed from the general plan. Other changes include revisions to the departments identified as being responsible for implementing policy.

Changes have been made to Goal Four, which is focused on open-space recreational needs in the county. Changes include removing or updating text that references past dates. Other changes to the implementation measures under Policy Twelve are as follows.

- Revising Implementation Measure 1 to include payment of public facility fees and other acceptable methods of mitigation by subdividers and developers.
- Revising Implementation Measure 2 to reflect that the Parks Master Plan has been established and will continue to be implemented and updated as necessary.
- Removing Implementation Measures 3 (June 30, 1996, deadline for adopting park standards) and 6 (improving accessibility of Henry Coe State Park for Stanislaus County residents), which are no longer topical, and renumbering the subsequent measures.
- Updating the text of Implementation Measure 4 to include the protection of river corridors.
- Revising Implementation Measure 5 to reflect a more general commitment to the dedication and improvement of parks and open space.

Changes to implementation measures under Goal Four, Policy Thirteen include small text revisions to Implementation Measure 2 and the addition of new Implementation Measure 3 to develop resort services in recreation areas.

Implementation Measure 2 under Policy Fourteen has been revised to include consistency with StanCOG's Non-Motorized Transportation Plan.

Changes under Policy Fifteen include revising text to reflect that building permits on parcels fronting all rivers and streams should verify that the building site is outside of U.S. Army Corps of Engineers easements.

Goal Five focuses on reserving open space lands subject to natural disaster in order to minimize loss of life and property. Changes under this goal include the following.

- A new Implementation Measure 6 stating that development proposals shall be reviewed for conformance with all applicable Hazard Mitigation Plans and consistency with the Safety Element.

Minor editorial revisions have been made to Goal Six, which focuses on improving air quality.

Goal Seven emphasizes minimizing solid waste disposal, and contains various revisions.

- Revision to Policy Twenty-Two, Implementation Measure 2 to reflect that the Countywide Integrated Waste Management Plan has been established and will be maintained as necessary.
- Revision to Policy Twenty-Two, Implementation Measure 5 to include e-waste and universal waste in the list of “special wastes” to be diverted from landfills or transformation facilities.
- A new Implementation Measure 6 to ensure that permitting and operation of recycling facilities that receive waste materials diverted from landfills will be evaluated for compatibility with surrounding land uses.

Goal Eight, Policy Twenty-Four, and Implementation Measure 5 under Policy Twenty-Four have been revised to include paleontological resources.

Goal Nine focuses on managing mineral resources extraction without damaging the environment. Changes include updating references to the 1993 (Special Report 173) Mineral Land Classification of Stanislaus County, and the following,

- Removing text from Implementation Measure 2 about approving individual projects despite significant environmental effects.
- Changing Implementation Measure 3 to state that areas identified in Special Reports prepared by the California Geological Survey shall be covered under the Mineral Resource land use designation in the Land Use Element of the general plan.

Goal Ten emphasizes protection of fish and wildlife species. Changes include the following.

- Removing Policy Twenty-Nine and its implementation measure relating to maintaining adequate water flow in the county’s rivers to allow for salmon migration.
- Revising Policy Twenty-Nine, Implementation Measure 2 to reference the California State Department of Fish and Wildlife’s California Natural Diversity Data Base and the California Native Plant Society’s plant lists as the primary sources of information on special-status species.

Goal Eleven focuses on the conservation of resources through alternative means. Changes under this goal include adding alternative energy sources to the list of zoning ordinance provisions.

Noise Element

The Noise Element’s code references are updated. Implementation Measure 2 under Policy Three, which included an outdated reference to creating a community noise control ordinance, has been removed. A new Implementation Measure 2 has been added to ensure that the Stanislaus County noise control ordinance is enforced. New Implementation Measures 3 and 4 have been added to Policy Four to ensure consistency between the Noise Element, the Noise Ordinance, and the updated ALUCP. The noise contour map will be updated based on the information provided by this EIR.

Safety Element

The Safety Element is updated to incorporate references to the County's Multi-Jurisdictional Hazard Mitigation Plan and to respond to SB 5 (2007) flood protection legislation by mapping 200-year floodplains located within urbanized areas (this includes flood hazards along the Tuolumne River, Stanislaus River, and Dry Creek). Throughout the element, references to outdated plans and policies, including Chapter 16.40 of the County Code, have been revised. Implementation measures regarding safety hazard overlay zones and air strip easements have also been added.

Implementation Measures throughout the Safety Element have been revised to include additional agencies as Responsible Departments.

Goal One, Policy Two, which prohibits development in areas that are within the designated floodway, has been expanded to include development in any areas known to be susceptible to being inundated by water from any source. A new Implementation Measure 3 has been added committing the County to amend the zoning ordinance as necessary to comply with SB 5.

Goal One, Policy Four focuses on landslide hazards. Implementation Measure 3 under this policy adds private roads (in addition to public roads) to the types of roads that should be designed to minimize landslide risks.

Goal Two focuses on minimizing loss of life and property due to hazardous conditions. Implementation Measure 1 under Policy Six is revised to include language to promote elements of the built environment that allow for surveillance of publically accessible areas. Implementation Measure 3 under Policy Six is revised to make reference to the need to provide fire safe defensible space around structures.

Policy Seven under Goal Two focuses on providing adequate fire and sheriff protection. Changes under Policy Seven include revising the departments responsible for implementation and changing outdated references to the Fire Safety Department to the Fire Warden's Office and the Local Fire Agency. In addition, Implementation Measure 5 now includes agricultural development as a type of new development that shall have water to meet fire flow standards established in the current adopted fire code and industry standards.

Goal Two, Policy Eight pertains to the safety of roads. Implementation Measure 1 under this policy is revised to clarify that all modes of travel (including pedestrian and bicycle) should have safety features provided under new development.

Goal Two, Policy Nine focuses on the formation of improvement districts to mitigate safety hazards. This policy is revised to offer the option of creating overlay zones to mitigate safety hazards. Additional changes to this section include a new Implementation Measure 3, to adopt overlay zones for the purpose of alerting property owners to restrictions relating to safety hazards.

Goal Two, Policy Ten limits the siting of air strips. New Implementation Measure 2 has been added so that development proposals for the establishment of air strips shall include easements to restrict development on neighboring properties.

Goal Two, Policy Eleven focuses on restricting maximum heights of large communication antennas within agricultural areas. This policy now includes wind power facilities. Implementation Measure 1 is revised to cross-reference the zoning ordinance standards for communications facilities.

Implementation Measure 2 is expanded to require referral of wind power facilities as well as communications facilities to local crop dusting operations.

Agriculture Element

Goal One of the Agriculture Element is to strengthen the agriculture sector of the County's economy. Objective Number 1.6, Protect Food Safety, has been revised to address food borne pathogen outbreaks. Goal Two of the Agriculture Element is to protect the County's agricultural land for agricultural use. Policy 2.5, which directs growth away from the County's most productive agricultural areas, has new Implementation Measure 3, which encourages development of alternative energy sources on lands located outside "Most Productive Agricultural Areas." Goal Three of the Agriculture Element is to protect natural resources that sustain the agricultural industry.

The Agriculture Element has several new additions related to water use and conservation. New Implementation Measure 5 under Policy 3.4 encourages using appropriately treated water (both reclaimed wastewater and stormwater) for agricultural and urban irrigation. There is a new Policy 3.6, which states the County will protect local groundwater for agricultural, rural domestic, and urban use in the County. New Implementation Measure 1 under Policy 3.6 ensures the County implements the existing groundwater ordinance.

2.2.2 Airport Land Use Compatibility Plan

The Stanislaus County Airport Land Use Commission (ALUC) is responsible for the preparation of Airport Land Use Compatibility Plans (ALUCPs) for public-use airports in Stanislaus County. The ALUC proposes to adopt a new County-wide ALUCP to replace the current Airport Land Use Commission Plan that was originally adopted on August 3, 1978, and amended on May 20, 2004. That plan provided height restrictions and building standards for areas adjacent to the five public and privately owned airports that were in the county at that time:

- Modesto City-County Airport
- Oakdale Municipal Airport
- Patterson Airport
- Turlock Airpark
- Crows Landing Airport (formerly Crows Landing Naval Auxiliary Landing Field)

The proposed ALUCP update (Stanislaus County 2014) provides information and promulgates policies for three airports: Modesto City-County Airport, Oakdale Municipal Airport, and Crows Landing Airport. Since adoption of the 2004 ALUCP, Patterson Airport has closed and the Turlock Airpark is in the process of being sold for non-aeronautical use, thereby making them ineligible for inclusion in the ALUCP update (Stanislaus County 2014). Additionally, in October 2011, the Caltrans Division of Aeronautics updated its guidance, the *California Airport Land Use Planning Handbook*, regarding the preparation of ALUCPs. The proposed 2015 ALUCP for Stanislaus County was prepared in accordance with these changes.

The proposed ALUCP reflects the anticipated growth of the Modesto City-County Airport and the Oakdale Municipal Airport for the next 20 years as required by Public Utilities Code Section 21675(a). The ALUCP was developed in coordination with a project working group that included

land use planners from the affected jurisdictions and representatives from the Modesto City-County Airport and the Oakdale Municipal Airport. The ALUCP for Crows Landing will be updated at such time as plans for the Crows Landing Business Park are completed and there is a better idea of what the future use of the airport will involve. The revisions coordinate the ALUCP with proposed general plan policies and take into account changes in land uses (apart from the general plan update) that have occurred since adoption of the current ALUCP. The updated ALUCP considers the following factors in accordance with guidance set forth by Caltrans' Division of Aeronautics in its *California Airport Land Use Compatibility Planning Handbook* (2011).

- Noise contours Safety Zones
- Airspace protection zones (Federal Aviation Regulation Part 77)
- Overflight areas (annoyance, disclosure)

The policies set forth in the revised ALUCP will be applied to all airports, but the area in which the policies will be applied is specific to each AIA. The most significant revisions are summarized below by airport.

Modesto City/County Airport

The AIA associated with the Modesto City/County airport remains similar to the area identified for the 2004 ALUCP. However, the following policy area maps were changed based on the most recent Airport Layout Plan.

- The noise contours upon which policies are based cover a smaller area than the previous ALUCP to reflect the use of newer, quieter aircraft.
- The size and configuration of safety zones have changed to reflect changes in airport operations and new guidance provided in the *California Airport Land Use Compatibility Planning Handbook*.
- Overflight policies are included for the first time.

Oakdale Municipal Airport

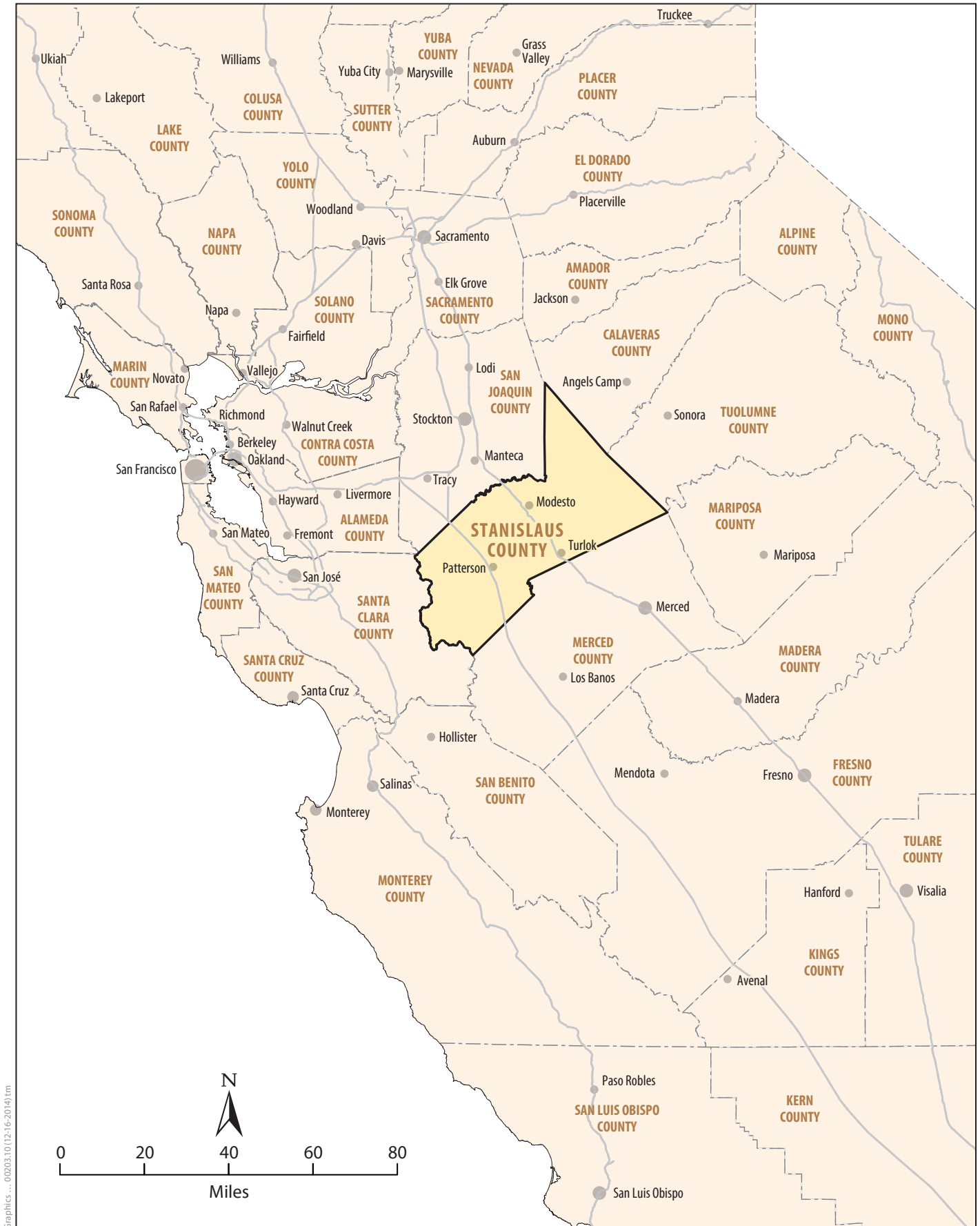
The City of Oakdale completed a new Airport Layout Plan in 2013. The AIA associated with the airport remains similar to the area identified in the County's 2004 ALUCP. However, the following policy area maps changed based upon the date presented in the 2013 plan.

- Noise contours were defined for the first time.
- New safety zones were developed to reflect new guidance provided by the *California Airport Land Use Compatibility Planning Handbook*.
- Overflight policies are included for the first time.

Other Airports in Stanislaus County

New policies were not developed for the Patterson Airport or Turlock Airpark. The Patterson Airport is no longer in operation, and Turlock Airpark is pending closure and sale for non-aeronautical use. Policies for the former Crows Landing military airfield will be revised upon adoption of a new Airport Layout Plan for that airport, and the policies set forth in the County's 2004 ALUCP for the Crows Landing airfield will remain in effect until that time.

[Background information is found in the publication entitled *Stanislaus County General Plan - Support Documentation*. For easy reference, each element of this plan is in a separate chapter whose number matches the corresponding chapter of background information in the support document. For instance, the Circulation Element is Chapter 2 of this document, with all of the reference material being located in Chapter 2A of the support document.]



Graphics ... 00203:10 (12-16-2014) tm



**Figure 2-1
Project Location**

Overview

The primary purpose of this EIR is to analyze the potential significant impacts of the proposed amendments to the general plan and the ALUCP. The State CEQA Guidelines define a significant environmental impact as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project.” (Section 15382) Not all of the changes that may result from the proposed amendments are significant.

The following impact analysis sections address the short- and long-term adverse impacts on the physical (natural and built) environment. “Existing conditions” are the baseline against which the potential impacts of the proposal are evaluated for significance. This means that the reasonably foreseeable impacts of the project are compared to the existing environment, not to the provisions of the current general plan and ALUCP. The “project” for purposes of the following analyses consists of the amendments to the general plan and ALUCP. The analysis assumes that the general plan will be partially built out by the planning horizon year of 2035.

Environmental Issues Addressed in the EIR

- 3.1 Aesthetics
- 3.2 Agricultural Resources
- 3.3 Air Quality
- 3.4 Biological Resources
- 3.5 Cultural Resources
- 3.6 Geology, Soils, and Paleontological Resources
- 3.7 Greenhouse Gas Emissions and Energy
- 3.8 Hazards and Hazardous Materials
- 3.9 Hydrology and Water Quality
- 3.10 Land Use and Planning
- 3.11 Mineral Resources
- 3.12 Noise
- 3.13 Population and Housing
- 3.14 Public Services
- 3.15 Recreation
- 3.16 Transportation and Traffic
- 3.17 Utilities and Service Systems

The sections listed above describe the environmental issues that will be addressed in this EIR. Each of these sections will include the following.

- A description of the regulatory setting (i.e., the federal, state, and local environmental regulations that apply to that resource).
- A description of the environmental setting for the particular resource.
- An identification of the significance thresholds or criteria that will be used to determine whether the project will have a significant effect on that resource.
- A description of the significant environmental impacts of the proposed project. This includes consideration of the extent to which existing and proposed general plan policies and implementation measures would reduce or avoid impacts.
- Specific mitigation measures that will reduce or avoid the identified significant effects, when feasible mitigation exists. These measures will be the responsibility of the County or other agencies to require.

3.1 Aesthetics

3.1.1 Introduction

This section discusses the impacts of the plan updates with respect to aesthetics. It lists the thresholds of significance that form the basis of the environmental analysis, describes the aesthetics study area and major sources used in the analysis, provides environmental setting information that is relevant to visual impacts, and assesses whether the plan updates would result in significant impacts with respect to aesthetics.

Study Area

The aesthetics impact study area for the project is defined as Stanislaus County.

3.1.2 Environmental Setting

This section describes the state and local regulations and policies that are applicable to the plan updates, and the existing conditions pertaining to aesthetics in the study area. The existing conditions constitute the baseline for this environmental analysis. There are no designated scenic trails or rivers in the visual study area. In addition, there are currently no federal and regional regulations pertaining to aesthetic resources.

Regulatory Setting

This section describes the state and local regulations related to aesthetics that would apply to the plan updates.

State

California Scenic Highway Program

Interstate 5 (I-5), within Stanislaus County from the San Joaquin to Merced County lines, has been officially designated by legislation as a state scenic highway (California Department of Transportation 2014a). The California Department of Transportation (Caltrans) defines a scenic corridor as the “land that is visible from, adjacent to, and outside the highway right-of-way, and is comprised primarily of scenic and natural features. Topography, vegetation, viewing distance, and/or jurisdictional lines determine the corridor boundaries.” Designated scenic corridors are subject to protection, including the regulation of land use, site planning, advertising, earthmoving, landscaping, and design and appearance of structures and equipment. Examples of visual intrusions that would degrade scenic corridors as stipulated by Caltrans, which are applicable to the proposed project, include dense and continuous development, power lines or communication facilities that dominate views, non-harmonious commercial retail development, highly reflective surfaces, development along ridge lines, extensive cut and fill, scarred hillsides and landscape, exposed and unvegetated earth, and dominance of exotic vegetation. Unsightly land uses would include actions that result in these conditions. (California Department of Transportation 2014b:1, 23–25). Section 261 of the California Streets and Highway Code establishes the following.

The standards for official scenic highways shall also require that local governmental agencies have taken such action as may be necessary to protect the scenic appearance of the scenic corridor, the band of land generally adjacent to the highway right-of-way, including, but not limited to (1) regulation of land use and intensity (density) of development; (2) detailed land and site planning; (3) control of outdoor advertising; (4) careful attention to and control of earthmoving and landscaping; and (5) the design and appearance of structures and equipment.

Local

Stanislaus County General Plan

Land Use Element

The Land Use Element contains policies that require development plan review in order to minimize land use conflict. This requirement indirectly protects aesthetic resources by ensuring visual compatibility between land uses (e.g., Goals Two and Five). There are also policies that require county-wide voter approval prior to allowing open space and agricultural land uses to be rezoned to residential uses (Goal Six). This limits the potential for changes that would have aesthetic impacts. Many land use policies pertain indirectly to aesthetic resources, such as protecting riparian habitat and preserving and encouraging enhancement of existing communities. However, the following directly pertains to aesthetic resources within the county.

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY TWO. Land designated Agriculture shall be restricted to uses that are compatible with agricultural practices, including natural resources management, open space, outdoor recreation and enjoyment of scenic beauty.

IMPLEMENTATION MEASURE

1. Agricultural areas should generally be zoned for 40- to 160-acre minimum parcel sizes. Exceptions include land in a ranchette area so identified because of significant existing parcelization of property, poor soils, location, and other factors which limit the agricultural productivity of the area.

Denair Community Plan Area

Like the general County policies, the Denair Community Plan Area portion of the Land Use Element contains many goals and policies pertaining indirectly to aesthetic resources, such as reinforcing Denair's rural town character, developing gateway treatments to mark town entries, and promoting transitional land uses between developed and agricultural areas. However, the following policies directly pertain to aesthetic resources in Denair.

GOAL ONE. Reinforce Denair's small rural town character.

POLICY THREE. Reduce the area currently designated for commercial uses in the community as a means of concentrating retail activity in a focused area.

IMPLEMENTATION MEASURES

1. Develop gateway treatments to mark the entries to the downtown at Santa Fe Avenue and Main Street and at Gratton Road and Main Street.
2. Create a pleasant pedestrian street environment through attractive streetscape design and features including street trees, lighting, sidewalks and planters.

3. Develop design guidelines for new and existing building renovation in the downtown, in keeping with a small town, pedestrian oriented street character.

GOAL TWO. Provide a well-defined community edge between Denair and adjacent agricultural land, as well as between Denair and the City of Turlock.

POLICY ONE. Create a greenbelt/buffer around the perimeter of the Community that provides clear sense of identity for the Community of Denair.

Keyes Community Plan Area

Like the countywide policies, the Keyes Community Plan Area portion of the Land Use Element contains many goals and policies that indirectly protect aesthetic resources, such as promoting transitional land uses between developed and agricultural areas. The following policies directly pertain to aesthetic resources in Keyes.

GOAL ONE. Achieve a harmonious relationship between the urban environment and surrounding agricultural setting.

POLICY FOUR. Cooperate with the City of Ceres to the north and the City of Turlock to the south in establishing definitive community separator policies/implementation measures.

IMPLEMENTATION MEASURE

2. Commercial, Highway Commercial, and Planned Industrial development shall be buffered from adjacent agricultural land uses outside the Community Plan Area by landscaping elements.

GOAL TWO. Improve the visual appearance of the Keyes community.

POLICY ONE. Encourage the development of identifiable community boundaries to establish a sense of community identity.

POLICY TWO. Encourage the development of “Gateway” treatments at major entryways to the community.

POLICY THREE. Encourage the upgrading, beautification and revitalization of existing commercial areas along 7th Street.

POLICY FOUR. Develop and Implement Design Guidelines for new development and for revitalization of existing development within Keyes.

POLICY FIVE. Promote alternative design solutions to reduce the negative visual impact of walled developments within Keyes.

IMPLEMENTATION MEASURES

1. The County should adopt Design Guidelines for the Keyes Community. The guidelines should address residential subdivision design and connectivity, non-residential development, and design/establishment of a gateway/entry features for Keyes.
2. “Gateway” treatments should be established at the State Route 99/Keyes Road Interchange, and at Rohde Road and the crossing of the Turlock Irrigation District’s Upper Lateral No 2 ½.
3. Develop positive, high quality landscaped edges along State Route 99 and major roads leading into the community
4. The County shall approve development proposals which include walls only if walls are necessary in order to mitigate the negative impacts of noise, visual separation from traffic, or to provide a barrier between incompatible land uses. Where walls are necessary, the County shall require separation from the roadway by a curb-adjacent sidewalk and a six-foot landscaped planter strip. A combination of walls, berming and vegetation is considered more desirable than walls used alone.

GOAL THREE. Encourage attractive and orderly development which preserves a small town atmosphere.

POLICY TWO. Create an enhanced streetscape environment through the use of landscape and pedestrian access along arterial and collector streets.

POLICY SEVEN. Multi-family residential land uses shall be developed with a balance of open space, landscaping, and shall be accessible to commercial and recreational areas and public transportation facilities.

IMPLEMENTATION MEASURES

1. Commercial development shall be consistent in scale and character with surrounding neighborhood.
5. Walled and isolated residential enclaves shall be discouraged.
7. Parks and schools shall be located and designed as neighborhood focal points.

GOAL FOUR. Promote highway-oriented commercial development in the State Route 99 corridor.

POLICY ONE. The County shall encourage the location of businesses and services (e.g., restaurants, service stations, lodging) in the State Route 99 corridor to serve the traveling public and local residents.

IMPLEMENTATION MEASURE

1. Designate land adjacent to the State Route 99/Keyes Road Interchange with good highway visibility and access as Highway Commercial. Permitted uses shall be those determined by the County to be supportive of the overall goals and policies of the Keyes Community Plan.

Del Rio Community Plan

Like the general County policies, the Del Rio Community Plan contains many goals and policies that indirectly protect aesthetic resources, such as preserving significant natural resources and promoting development to occur in an orderly manner, preserve prime agricultural areas, and avoid of adverse impacts to agricultural areas and air and water quality. The plan also contains direction on preserving natural open space areas and allowing for landscaped parkways. However, the following policies directly pertain to aesthetic resources in Del Rio.

GOAL FIVE. Future development shall be served by adequate public infrastructure.

POLICY A. All future development in Del Rio shall require underground utilities and facilities for community-wide secondary sewage treatment and water supply systems.

Land Use Plan, Standard 2. Planned developments adjacent to agricultural land shall be required to incorporate buffers, such as roads, green belts, or natural open spaces, between residential and ag use so as to minimize potential use incompatibilities.

Circulation Element

The Circulation Element contains description of scenic highways. As described under State regulations, above, I-5 is a designated state scenic highway within Stanislaus County. However, the description within the Circulation Element does not contain policies that protect or direct development along I-5 within the County.

The element does contain information regarding visual enhancement efforts of SR-99.

...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 roads, 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. A collaborative effort led by the Great Valley Center is 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 this effort, 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.

The following pertains to aesthetic resources within the County:

GOAL ONE. Provide a system of roads and roads throughout the County that meets land use needs.

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.

IMPLEMENTATION MEASURE

10. 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.

POLICY FIVE. Transportation requirements of commercial and industrial development shall be considered in all planning, design, construction, and improvements.

IMPLEMENTATION MEASURE

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.

Conservation/Open Space Element

The Conservation/Open Space Element contains many goals and policies that indirectly protect aesthetic resources, such as preserving natural resources in parks and open spaces, ensuring zoning regulations pertaining to development ensure compatibility with natural areas, restricting development in sensitive habitat areas, protecting and enhancing oak woodlands, preserving water quality, improving air quality, conserving agricultural lands, and preserving historical sites. In addition, there are policies and measures that promote increased visual access and aesthetic enjoyment through the creation of parks and trail systems. However, while the following goal directly pertains to aesthetic resources, the policies and measures indirectly apply, as previously described.

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

Safety Element

The Safety Element does not contain goals or policies that directly relate to aesthetic resources. However, many of the policies pertain indirectly to the preservation of aesthetic resources, such as minimizing the impacts of a natural and human-made disasters that have the ability to result in large-scale visual changes through catastrophic wildfires, flooding, seismic activity, and landslides.

Agricultural Element

The Agricultural Element does not contain goals or polices that directly relate to aesthetic resources. However, it does contain policies that indirectly protect aesthetic resources by promoting the use of physical, visual buffers between developed and agricultural land uses to minimize conflicts and measures to restrict adverse environmental impacts through the conversion of agricultural lands to other land uses.

Airport Land Use Compatibility Plan

The County's current ALUCP was adopted in 1978 and last amended in 2004 by the ALUC to address each public-use and military airport. An ALUCP must reflect the anticipated growth an airport for at least 20 years based on a long-range master plan or airport layout plan. Each ALUCP includes policies to prevent conflicts between planned airport development and proposed land uses within the AIA identified in the compatibility plan (Stanislaus County 2004). The current ALUCP contains the following policies pertaining to aesthetic resources:

Conditions Areas 1 and 2

General Statement

Statement 2. Non-reflective materials to be used in buildings and signs where reflection would cause a flying hazard.

Statement 5. All bulk storage of volatile or flammable liquid should be underground.

Statement 6. Lights for any purpose shall be constructed and used in such a manner as not to create a hazard for pilots or air traffic control.

Commercial Uses

Hotels, motels, shopping centers, office buildings, retail stores, restaurants and other service uses:

3. Should locate flashing and animated signs or lights in such a manner as to not create a hazard for approaching pilots.

Industrial Uses

Research laboratories, non-air related manufacturing, petroleum and chemical products bulk storage:

1. All bulk storage of volatile or flammable liquids or substances to be underground.
2. Non-reflective materials to be used in buildings and signs where reflection would cause a flying hazard.
4. Avoid orienting lights or paved area in such a manner as to appear to be an aircraft landing area.

Utilities

Reservoirs, Water Treatment and Sewage Disposal Plants:

1. Should have reason for location and be constructed in such a way as to not create nuisance.

Electrical Plants:

1. Except for small emergency power plants located adjacent to buildings, electrical plants should be undergrounded if of sufficient height and placement as to be a possible hazard to aircraft.

Power Lines:

1. Should be undergrounded if of sufficient height and placement as to be a possible hazard to aircraft.

Conditions Area 3

General Statement

Statement 4. All bulk storage of volatile or flammable liquid should be underground.

Statement 6. Lights for any purpose shall be constructed and used in such a manner as not to create a hazard for pilots or air traffic control.

Agricultural Uses

Greenhouses, poultry farms, dairy farms:

1. Non-reflective materials to be used in buildings and signs where reflection would cause a flying hazard.

Commercial Uses

Office buildings, public buildings, restaurants and food take-outs, retail stores and other service uses:

1. Should have reason for location (i.e., serve other uses in the area of the traveling public) and be constructed in such a way as to not create a hazard or nuisance.
2. Should locate flashing and animated signs or lights in such a manner as to not create a hazard for approaching pilots.

Industrial Uses

Research laboratories, aircraft factories, non-air manufacturing, petroleum and chemical products bulk storage:

1. All bulk storage of volatile or flammable liquid should be underground.
2. Avoid orienting lights or paved area in such a manner as to appear to be an aircraft landing area.

Utilities

Petroleum and chemical products bulk storage, electrical plants and power lines:

1. All bulk storage of volatile or flammable liquids or substances should be underground.
2. Power lines should be undergrounded if of sufficient height and placement as to be a possible hazard to aircraft.

Conditions Area 4

General Statement

Statement 2. Non-reflective materials to be used in buildings and signs where reflection would cause a flying hazard.

Statement 5. All bulk storage of volatile or flammable liquid be underground.

Statement 6. Lights for any purpose shall be constructed and used in such a manner as not to create a hazard for pilots or air traffic control.

Policies Plan

It shall be the policy of the Stanislaus County Airport Land Use Commission to:

6. Advise against the establishment of any use within the planning area which will:
 - Make it difficult for pilots to distinguish between airport lights and others;
 - Result in glare in the eyes of pilots using the airport;
 - Impair visibility in the vicinity of the airport or otherwise in any way create a hazard or endanger the landing, take-off, or maneuvering of aircraft intending to use the airport; or,
 - Permit structures or trees to a height in excess of established height limitations.
9. Encourage jurisdiction to make sure that when a land use changes, it would change from an incompatible use to a compatible one.

Stanislaus County Code**Airport Regulations**

17.20.010 Interference with navigation. Notwithstanding any other provisions of this title, no use may be made of land or water within the airport zone in such a manner as to create electrical interference with navigational signals or with radio communication between the airport lights and others, to result in glare in the eyes of pilots using the airport, to impair visibility in the vicinity of the airport or otherwise in any way to create a hazard or endanger the landing, takeoff, or maneuvering of aircraft intending to use the airport. (Prior code §9-5).

Zoning Ordinance

Stanislaus County's Zoning Ordinance regulates land use. Many land uses require landscaping that is water efficient (Chapter 21.102, *Landscape and Irrigation Standards*). In addition, the ordinance contains the following policies pertaining to aesthetic resources (Stanislaus County 2014):

General Agriculture District (A-2)

21.20.010 Purpose. It is the intent of these district regulations to support and enhance agriculture as the predominant land use in the unincorporated areas of the county. These district regulations are also intended to protect open space lands pursuant to Government Code Section 65910. The procedures contained in this chapter are specifically established to ensure that all land uses are compatible with agriculture and open space, including natural resources management, outdoor recreation and enjoyment of scenic beauty. (Ord. CS 531 §1, 1993; Ord. CS 106 §2, 1984).

Historical Site District (HS)

21.44.010 Purposes. It is the intent of these district regulations to support and enhance the character of historical areas within the county. These district regulations also recognize historical structures as a finite resource which is a product of another time and worthy of special consideration. When new additions, alterations, or rehabilitation projects are proposed to existing structures and are approved by the historical site subcommittee of the county planning commission or planning staff, these district regulations shall enable the building official to grant exemptions from building code requirements when in his or her opinion such maintenance of the historical character of such buildings or structures and the granting of the exemptions will not create or allow any condition which is immediately hazardous to life or property. The existing unique character of these areas is considered a scenic and economic asset and has significant value to the general welfare. The review provided for by this chapter is intended to ensure that any development in the subject areas will not be unsightly, undesirable, or obnoxious to the extent that such development will impair the

quality of the area. The following regulations shall apply in HS districts and shall be subject to the provisions of Chapter 21.08. (Ord. CS 106 §8, 1984).

Surface Mining and Reclamation

21.88.010 Purpose and intent

- A. The county recognizes that the extraction of minerals is essential to the continued economic well-being of the county and to the needs of society and that the reclamation of mined lands is necessary to prevent or minimize adverse effects on the environment and to protect the public health and safety. The county also recognizes that surface mining takes place in diverse areas where the geologic, topographic, climatic, biological, and social conditions are significantly different and that reclamation operations and the specifications therefore may vary accordingly.
- B. The purpose and intent of this chapter is to ensure the continued availability of important mineral resources, while regulating surface mining operations as required by California's Surface Mining and Reclamation Act of 1975 (Public Resources Code Sections 2710 et seq.), as amended, hereinafter referred to as "SMARA," Public Resources Code (PRC) Section 2207 (relating to annual reporting requirements), and state Mining and Geology Board regulations (hereinafter referred to as "state regulations") for surface mining and reclamation practice (California Code of Regulations [CCR], Title 14, division 2, Chapter 8, Subchapter 1, Sections 3500 et seq.), to ensure that:
 - 1. Adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition which is readily adaptable for alternative land uses;
 - 2. The production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment.
- C. Residual hazards to the public health and safety are eliminated. (Ord. CS 663, §20, 1998).

Communication Facilities

21.91.050 Aesthetic considerations. Decisions on use permits or staff approval permits may take into consideration the aesthetic impact of the proposed microwave dish antennas and/or communications facilities and may include conditions of approval for the purpose of reducing the visual impact of the antenna and/or facility as seen from adjacent properties or for the purpose of reducing the potential of safety or health hazards. Such conditions may include, but are not limited to, partitions, screening, landscaping, mountings, fencing, height of antenna, and site location within parcel. (Ord. CS 600 §1, 1995).

Existing Conditions

Stanislaus County is located in the Central Valley of California (Figure 2-1). The landform in, and surrounding, the project area is characterized by the flat valley floor that is largely in agricultural and dairy production. The agricultural fields allow for expansive, long-range views to the middleground and background. The Diablo Range can be seen in the background, to the west, rising above the flat valley floor and is visible to varying degrees due to atmospheric conditions such as haze or the presence or absence of vegetation and infrastructure that can obscure views.

For purposes of the visual analysis, the project region, as discussed in this section, is considered the area within a 30-mile radius of county boundaries. This encompasses the views from the county's borders outward and along the major transportation corridors of I-5 and SR-99. Therefore, the cities of Lodi, Stockton, Manteca, Modesto, and Turlock are also within the region and will be considered at a very general level in this analysis. Most regional development occurs along transportation corridors, such as I-5 to the west and SR-99 to the east. The Sacramento-San Joaquin River Delta (Delta), west of the project site, is an integral part of the region's visual character. Connected to the

Delta are many rivers, creeks, sloughs, and bays that strongly influence local land use patterns. East of the Delta, open agricultural land is dotted with rural development that becomes increasingly urbanized near the city limits of Stockton and other smaller cities and towns in the region.

Agricultural land in the region, planted predominantly with orchard and row crops, stretches for miles. A patchwork of fields separates cities within the region from one another. These fields offer expansive views that extend over the valley floor to the east and Diablo Range to the west when haze is at a minimum. These landscape views are strongly characteristic of the Central Valley and have contributed to the regional identity.

Development radiating out from the urban cores is reducing the amount of agricultural land in parts of the County and closing the gap between larger and smaller outlying cities. This is beginning to change the visual character from rural to suburban, particularly in the central portion of the County near Modesto. The smaller cities, such as Patterson, are typified by a growing core of residential, commercial, and some industrial land uses with agricultural fields surrounding the city outskirts.

A mix of agricultural, developed, and natural landscapes characterizes the project region. The landscape pattern is influenced by development spreading from existing city cores and the major roadways in the region. Water features in the greater region include the Stanislaus, Tuolumne, and San Joaquin rivers and their tributaries, numerous San Joaquin River Delta sloughs, Delta-Mendota Canal, California Aqueduct, and smaller local irrigation ditches.

Affected viewers in the county include residential, recreational, industrial, institutional, and commercial viewers and viewers on local freeways, highways, and smaller arterials. Viewer sensitivity would range from low to high depending on location in the landscape relative to projects and presence or absence of various viewer groups.

3.1.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan updates; the individual impacts relative to the thresholds of significance; mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and the overall significance of the impact with mitigation incorporated.

Major Sources Used in Analysis

The major sources used in this analysis are listed below:

- Caltrans' *Officially Designated State Scenic Highways* (<http://www.dot.ca.gov/hq/LandArch/scenic/schwy.htm>).
- Stanislaus County General Plan

Approach and Methodology

The qualitative analysis of aesthetic resources impacts associated with the proposed project was based on the following.

- Familiarity with the County's visual landscape and land uses.
- Aerial imagery and mapping provided by Google Maps and Google Earth.

- Review of the project in regard to compliance with state and local ordinances and regulations and professional standards pertaining to visual quality.

Professional Standards

Professional standards result from professional and direct expertise gained by staff working on visual analyses and consulting with other experienced staff on visual effects, including knowledge gained from public input on a broad range of projects. The effects listed represent collective knowledge that is professionally agreed upon and represents common, general public concerns. According to professional standards, a project may be considered to have significant impacts if it would result in the following.

- Conflict with local guidelines or goals related to visual quality.
- Alter the existing natural viewsheds, including changes in natural terrain.
- Alter the existing visual quality of the region or eliminate visual resources.
- Increase light and glare in the project vicinity.
- Generate backscatter light into the nighttime sky.
- Reduce sunlight or introduce shadows in community areas.
- Obstruct or permanently reduce visually important features.
- Create long-term (that is, persisting for 2 years or more) adverse visual changes or contrasts to the existing landscape as viewed from areas with high visual sensitivity.

Thresholds of Significance

Based on State CEQA Guidelines Appendix G and adapted to analysis of the plan updates rather than an individual development project, the project would have a significant impact with respect to aesthetics if it would result in any of the following.

- Substantially degrade the existing visual character or quality of the county and its surroundings, including scenic vistas.
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway.
- Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.

Impacts and Mitigation Measures

Impact AES-1: Substantially degrade the existing visual character or quality of the county and its surroundings, including scenic vista (less than significant)

Many of the proposed 2014 General Plan updates would not directly affect aesthetic resources but could result in indirect visual impacts because of the specified changes or would only result in minor, site-specific alterations that would not be noticeable, landscape-level changes within the county. Overall development that would result from implementation of the general plan, as amended by the project, would change the existing visual character of the county, but not to a significant extent.

Land Use Element

Many of the proposed 2014 General Plan Land Use Element updates would not directly affect aesthetic resources but could result in indirect visual impacts because of the specified changes or would only result in minor, site-specific alterations that would not be noticeable, landscape-level changes within the county. Other updates would more directly impact aesthetic resources. These changes are analyzed below.

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY SIX. Preserve and encourage upgrading of existing unincorporated urban communities.

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 development being designed and built to help facilitate the upgrading or expansion of services necessary to upgrade existing unincorporated urban communities could result in indirect visual impacts by increasing the amount of visible utilities and infrastructure in the county. Because these communities are either small, such as Westley, requiring only small facilities, or already urbanized, such as Denair and Keyes, placing new facilities in an urban context, the visual impact would be less than significant.

GOAL THREE. Foster stable economic growth through appropriate land use policies.

POLICY EIGHTEEN. Promote diversification and growth of the local economy.

IMPLEMENTATION MEASURE

9. Encourage reuse of the Crows Landing Air Facility as a regional jobs center.

Encouraging the reuse of the Crows Landing Air Facility as a regional jobs center could result in direct visual impacts from redevelopment of this empty site, altering the appearance of the affected area. The extent of this impact cannot be known with certainty because the height, mass, lighting, and other visual features of future development are not known at this time. I-5 is a state scenic highway; however, the Crows Landing facility is over a mile away, will be limited in height, and is separated from I-5 by topography, intervening farm fields, and existing infrastructure, including the California Aqueduct, the Delta Mendota canal, and the Fink Road interchange. Changes to the facility will be perceived from viewers on I-5 as distant background changes. This will result in a less-than-significant impact. The future EIR that will be prepared for redevelopment of the facility will provide a more specific analysis of this impact.

GOAL THREE. Foster stable economic growth through appropriate land use policies.

POLICY TWENTY-TWO. Support and facilitate efforts to develop and promote economic development and job creation centers throughout the County.

New policies supporting efforts to direct economic development and job creation centers towards incorporated areas and also within unincorporated areas of unique character could result in direct visual impacts by encouraging sites to be redeveloped, altering the appearance of affected areas. However, these policies will reinforce existing urban

landforms and avoid the placement of such uses in non-urbanized areas where they would have a significant visual effect. As a result, their effect would be less than significant.

GOAL FIVE. Complement the general plans of cities within the County.

POLICY TWENTY-SEVEN. Development which requires discretionary approval and is outside the sphere of influence of cities but located within one mile of a city's adopted sphere of influence and within a city's adopted general plan area, shall be referred out to the city for consideration. However, the County reserves the right for final discretionary action.

IMPLEMENTATION MEASURES

1. All discretionary development proposals within one mile of a city's adopted sphere of influence boundary and within a city's adopted general plan area, shall be referred to that city.
2. The County shall consider applying city development standards to discretionary projects located within one mile of a city's adopted sphere of influence boundary and within the city's adopted general plan area to the extent such standards are appropriate for the type of development.
3. Encourage joint County and city cooperation in establishing land use and development standards along all major county defined gateways to cities.

Policies that direct County development projects located within 1 mile of cities' spheres of influence, adopted plan areas, and along all major County-defined gateways to cities that encourage County development to work with and complement development standards within those cities, through discretionary approval, would promote transitional development that is visually less disjointed and more cohesive between city and county borders. This effect would be less than significant.

GOAL SIX. Promote and protect healthy living environments.

POLICY TWENTY-NINE. Support the development of a built environment that is responsive to decreasing air and water pollution, reducing the consumption of natural resources and energy, increasing the reliability of local water supplies, and reduces vehicle miles traveled by facilitating alternative modes of transportation, and promoting active living (integration of physical activities, such as biking and walking, into everyday routines) opportunities.

POLICY THIRTY. New development shall be designed to facilitate the efficient extension of public transportation systems.

POLICY THIRTY-ONE. 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

Promoting and protecting healthy living environments by encouraging development that decreases air and water pollution, reduces the consumption of natural resources and energy, increases the reliability of local water supplies, facilitates alternative modes of transportation, promotes active living, and improves local healthcare options through the siting of new facilities in locations with the infrastructure to support facility and client needs could result in both direct and indirect visual impacts. Promoting new developments to be designed in such a manner could result in a visual shift in the appearance of development and development patterns. Many of these changes would act to protect aesthetic resources and provide for new or continued access to aesthetic resources within the county that are valued by viewers, such as views to the clear sky and unpolluted waters and access to reservoirs that are used for both local water supplies and recreation. These changes would

also help to maintain visual access to scenic beauty associated with various habitat types within the county by reducing the consumption of natural resources that otherwise would have led to a greater degree of land and vegetation disturbance. This effect would be less than significant.

The 2014 General Plan Land Use Element updates would retain and modify existing, and create new, policies that overall would result in positive effects on aesthetic resources in the County. No changes to the general plan land use map are proposed. Land use changes resulting from implementation of the general plan could change the existing visual character of the county, which is largely rural, to one that is more developed in nature. For example, the community of Salida is currently planned for substantial urbanization. These changes would be seen in regular and vista views. As discussed above most of these changes are not attributable to the 2014 General Plan updates, but would result from implementation of the General Plan as a whole. Overall development that would result from implementation of the general plan, as amended by the project, would change the existing visual character of the county, but not to a significant extent.

Circulation Element

The proposed 2014 General Plan Circulation Element updates would result in aesthetic resource impacts ranging from minor, site-specific alterations that would not be noticeable to larger, county-wide visual changes associated with transportation facilities, such as the South County Corridor and wider intersections planned throughout the County. These changes are analyzed below.

- New FHWA-consistent classifications that incorporate changes to the right-of-way standards allowing Public Works more discretion in whether right-of-way needs to be obtained could lead to indirect visual impacts by facilitating widening of roadways and right-of-ways in the county.

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 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

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.
12. Existing and new 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.
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.
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.

Amending the County's LOS standard from LOS C to LOS D for all county roadway segments and establishing LOS C as the standard for motorized vehicles at all roadway intersections would reduce the need for road widening in order to maintain LOS C. This would not result in visual impacts.

New policies that encourage development with multiple points of ingress and egress to aid in traffic flow and pedestrian accessibility, to encourage alternatives to onsite parking standards, and to encourage development that provides a safe, comprehensive, and coordinated transportation system that includes a broad range of transportation modes could also result in impacts on aesthetic resources. Impacts could occur by increasing the visual prominence and presence of transportation facilities in the county by promoting additional utilities (e.g., signals and lighting) and infrastructure (e.g., bus turnouts, trails, bike lanes on roadways) associated with transportation systems. These types of improvements are generally of low visual intensity and would therefore not have a significant effect.

Circulation systems designed to promote safety by combining multiple modes of transportation into a single, cohesive system could result in impacts on aesthetic resources by increasing the visual prominence and presence of transportation facilities in the county by promoting additional utilities (e.g., signals and lighting) and infrastructure (e.g., bus turnouts, trails, bike lanes on roadways) associated with transportation systems. These measures also provide for including aesthetic features such as site furnishing, landscaping, and pedestrian-scale lighting and signage to improve aesthetics. They are generally of low visual intensity and would therefore not have a significant effect.

Study Areas

Table 2-5
SPECIAL STUDY AREAS

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

Including new Special Study Areas would indirectly result in impacts on aesthetic resources because these studies would be performed to determine how to best modify these areas to alleviate traffic and safety concern. The studies would then translate into physical modifications that would alter the appearance and, potentially, the visual character of these affected areas. This is not a substantial change in existing county policies regarding special study areas. As a result the change attributable to the General Plan update would not result in significant effects.

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.~~

The general plan update would remove the current description of Scenic Highways from the Circulation Element. The current description does not contain policies that protect or direct development along scenic highways in the county and would not affect state policies related to scenic I-5. Therefore, its removal would not affect aesthetic resources in the County.

Changes to the Circulation Element would result in widened roadways and combined modes of transportation that would impact aesthetics by widened facilities and new bus turnout, park-and-ride lots, and similar features. These changes would also result in an increase in paved surfaces, transportation infrastructure (e.g., trails, bike lanes on roadways, bus shelters), signage, pavement markings, site furnishings (e.g., benches, trash receptacles, bollards, light posts), and signals and lighting associated with more modern transportation facilities. Changes to the element do not include policies or requirements that would increase the visual prominence and presence of larger scale transportation facilities in the county, and the new improvements resulting from implementation of the proposed changes are typically of low visual intensity. Some of these changes would also improve aesthetics. As a result, impacts on aesthetic resources would be less-than-significant.

Agricultural Element

The General Plan does not currently have a policy or implementation measure that would restrict the installation of alternative energy source recovery facilities. However, the following implementation measure would limit the area where such facilities could be located and thereby lower the potential for aesthetic impacts in relation to what would be allowed under current General Plan policies.

GOAL TWO. Conserve our agricultural lands for agricultural uses.

POLICY 2.5. To the greatest extent possible, development shall be directed away from the County's most productive agricultural areas.

IMPLEMENTATION MEASURE

The County shall encourage the development of alternative energy sources on lands located outside "Most Productive Agricultural Areas".

Applying the proposed amendment to existing conditions would result in a lesser impact than the application of current general plan policies and implementation measures. The impact of this amendment is less-than-significant.

Conservation and Open Space Element

The proposed 2014 General Plan Conservation and Open Space Element updates would affect aesthetic resources as a result of landscape-level changes. These changes are analyzed below.

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

POLICY TWO. Assure compatibility between natural areas and development.

IMPLEMENTATION MEASURES

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.
4. Discourage the establishment of conservation areas or nature preserves within adopted Airport Influence Areas

Changes that require the ALUC to review development within the AIAs to ensure that projects are compatible and have the potential to create habitat and habitat conservation would allow for development within AIAs while promoting aesthetic resources through design compatibility and protecting aesthetic resources.

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

POLICY TWO. Assure compatibility between natural areas and development.

IMPLEMENTATION MEASURE

5. Consider adoption of scenic corridors to protect and preserve natural scenic vistas located throughout the County.

Adopting a scenic corridors program to protect and preserve natural scenic vistas throughout the county would protect aesthetic resources by working toward establishing protection measures for these valued views and resources.

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

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 MEASURE

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.

Requiring the inclusion of mitigation measures that protect habitat within undisturbed riparian habitat and/or vernal pools or other sensitive areas would indirectly protect aesthetic resources by working towards establishing protection measures for resources that have aesthetic value.

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 MEASURE

4. 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.

Including the protection of river corridors within this policy would aid in protecting aesthetic resources associated with river corridors.

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 MEASURE

5. 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.~~

Asserting a greater commitment to the dedication and improvement of parks and open space would ensure these places retain their aesthetic resources and visual character and do not become degraded or blighted over time.

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

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

IMPLEMENTATION MEASURES

2. The County shall, when funds become available, install and maintain boating-ramps facilities, where appropriate.
3. The County shall encourage the development of on-site resort services and accessory sales designed to enhance recreational opportunities, where appropriate.

Maintaining boating facilities would ensure these places retain their aesthetic and visual character and do not become degraded or blighted over time.

Developing resort services in recreation areas could result in site-specific visual impacts that may be positive or negative depending on how existing aesthetic resources are affected and how site improvements enhance, compliment, or degrade the existing character of the site. For example, tree removal at one site to accommodate resort services may be a negative visual impact while landscape plantings and site furnishings could improve the visual conditions at another location.

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

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 MEASURE

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.

Establishing new or expanded recreation areas would enhance the aesthetic resources of the County.

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

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 MEASURE

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.

This measure could have visual impacts with additional truck trips. However, allowing recycling facilities to receive waste materials diverted from landfills would reduce impacts on aesthetic resources by helping reduce the need and rate at which landfills would expand vertically and horizontally to accommodate waste and would conserve the use of natural resources through recycling efforts.

GOAL NINE. Manage extractive mineral resources to ensure 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 MEASURE

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.~~

Removing language that allowed the approval of individual projects despite significant environmental effects would result in beneficial impacts on aesthetic resources by limiting the potential for projects that could gravely affect such resources to be approved and implemented.

GOAL ELEVEN. Conserve resources through promotion of waste reduction, reuse, recycling, composting, ride-share 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. 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 MEASURE

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.~~

Including siting provisions in the zoning ordinance for alternative energy sources could have positive impacts as specific standards will apply to all such projects, rather than the case by case review that occurs currently, depending on how existing aesthetic resources are affected by the siting.

Conservation and open space standards would generally result in positive impacts on aesthetic resources by preserving and limiting impacts on existing resources such as habitat areas, potentially creating protected scenic corridors, and helping to retain existing park and boat facilities.

Safety Element

The proposed 2014 General Plan Safety Element updates would result in aesthetic resource impacts ranging from minor, site-specific alterations that would not be noticeable, to county-wide and site-specific visual changes that could affect sensitive, private viewers negatively. These changes are analyzed below.

GOAL ONE. Prevent loss of life and reduce property damage as a result of natural disasters.

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 MEASURE

3. The routes of new public and private roads in areas subject to landslides shall be designed to minimize landslide risks.

Including private roads among the types of roads that should be designed to minimize landslide risks would result in minor aesthetic impacts because the measure may require more vegetation removal and landform modification or the introduction of retaining walls to accommodate safer roadside slopes and slope stabilization. The potential for adverse impacts is minimal because most of the areas subject to future development are not sloped.

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.
3. Development standards shall be imposed to provide street lighting, storm drainage, adequate setbacks, fire walls and fire safe standards for defensible space.

Promoting design elements within the built environment that allow for surveillance of publically accessible areas and providing for fire safe defensible space around structures would result in minor aesthetic impacts because such measures may result in more open public spaces or

variations in structure design to meet design standards and may require more tree and shrub removal around structures to achieve safety standards. Defensible space is a requirement of state law, so the effect of these implementation measures would be minimal.

GOAL TWO. Minimize the effects of hazardous conditions that might cause loss of life and property.

POLICY EIGHT. Roads shall be maintained for the safety of travelers.

IMPLEMENTATION MEASURE

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.).

All modes of travel, including pedestrian and bicycle, having safety features provided under new development could result in minor visual impacts by increasing the visual prominence and presence of safety structures and features associated with transportation systems in the county by promoting additional utilities (e.g., signals and lighting) and infrastructure (e.g., signage, fencing, and bridges) associated with transportation facilities. These would be typical of development projects.

GOAL TWO. Minimize the effects of hazardous conditions that might cause loss of life and property.

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.)~~
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.

Restricting the maximum height, markings (lights), and location to provide maximum safety associated with large communication and wind power facilities within agricultural areas would impact aesthetic resources by allowing, yet limiting, the location, lighting, and height of such facilities, minimizing their impact.

Safety standards may result in either positive or negative impacts upon aesthetic resources depending upon the existing land use and proposed change. For example, visual changes to private rural drives to increase landslide safety may be seen as a negative change due to greater earthwork and vegetation removal, while promoting safety in public places may be seen as a positive visual change by creating environments where viewers feel safer. In some cases, earthwork and vegetation removal could create positive visual changes.

The 2014 General Plan Update would retain and modify existing, and create new, policies that reduce impacts affecting aesthetic resources in the county. Safety changes, as a whole, would not

substantially change the existing visual character of the county because they would be an element of development and small in scale; their effect would be less-than-significant.

Airport Land Use Compatibility Plan

The updated ALUCP considers the noise contours, safety zones, airspace protection zones (FAR Part 77), and overflight areas (annoyance, disclosure) for the Modesto and Oakdale airports in accordance with guidance set forth in the *California Airport Land Use Compatibility Planning Handbook* (California Department of Transportation 2011). The Crows Landing airport is currently being updated and will be incorporated into the ALUCP. Policies set forth in the revised ALUCP would be applied to all airports and their associated AIA. The most significant revisions that would affect aesthetic resources are associated with Airport Protection Policy 3.4.2 that includes height restrictions for objects in and out of a Critical Airspace Protection Zone to prevent conflict within Airspace Protection Surfaces and object marking and lighting to be installed as directed by the Federal Aviation Administration (FAA) aeronautical study or the California Division of Aeronautics. These changes would aesthetically benefit affected areas by reducing the amount of vertical infrastructure permitted in AIAs, yet could slightly increase lighting effects associated with FAA and California Division of Aeronautics safety lighting. In addition, Airport Protection Policy 3.4.3 would benefit aesthetic resources by restricting new sources of glare (e.g., mirrored or highly reflective surfaces); bright or distracting lights (e.g., search lights, stadium lights, and laser light displays); and sources of dust, steam, or smoke that may impair pilots' vision. Both of these policies would benefit aesthetic resources by limiting structure heights and sources of light and glare in AIAs.

3.4.2 Airspace Obstruction/Object Height Criteria. The criteria for determining the acceptability of a Project with respect to height shall be based upon the standards set forth in Federal Aviation Regulations (FAR) Part 77, Subpart C, Safe, Efficient Use and Preservation of the Navigable Airspace and applicable airport design standards published by the FAA. Additionally, where an FAA aeronautical study of a proposed object is required as described in Policy 3.4.4, the results of that study shall be taken into account by the ALUC and the Local Agency.

Summary

Changes associated with the 2014 General Plan updates would result in less-than-significant impacts on aesthetic resources, as described above. Overall development that would result from implementation of the general plan, as amended by the project, would change the existing visual character of the county, but not to a significant extent.

Significance without Mitigation: Less than significant (no mitigation required)

Impact AES-2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway (less than significant)

Land Use Element

Many of the proposed 2014 General Plan Land Use Element updates would not directly affect aesthetic resources associated with I-5, but could result in indirect visual impacts because of the specified changes or in minor, site-specific changes that would be seen from vantages along I-5. These changes are analyzed under Impact AES-1. In addition, planned developments require design standards. Community Plans where development may occur already have design standards that would be implemented with many new developments.

The 2014 General Plan updates would retain and modify existing, and create new, policies that reduce impacts affecting aesthetic resources along I-5. Land use changes, particularly the future development of the Crows Landing Air Facility as a regional jobs center, could change the existing visual character along I-5 to one that is more developed in nature. However, these changes would be seen in distant background views available from the corridor and would not substantially adversely affect its visual character. The precise level of impact would be disclosed in future CEQA analyses of these projects. Because of the low intensity of the visual change, they are presumed here to be less than significant.

Agricultural Element

See the discussion of proposed Implementation Measure 3 under Policy 2.5 under Impact AES-1. The impact of this amendment is less-than-significant.

Circulation Element

The proposed 2014 General Plan Circulation Element updates, analyzed under Impact AES-1, could impact aesthetic associated with I-5 by widening roadways and combining modes of transportation. The amount of future development along the I-5 corridor that will be within the unincorporated county is rather limited under the General Plan. As a result, new bus turnouts, park-and-ride lots, and similar features are unlikely to be visible from I-5. Transportation changes related to development of the Crows Landing Air Facility as a regional jobs center could also increase the amount of paved surfaces, transportation infrastructure (e.g., bridges, retaining structures, and roadways), signage, pavement markings, site furnishings (e.g., benches, trash receptacles, bollards, light posts), and signals and lighting associated with more modern transportation facilities. However, given the distance from I-5, the changes are unlikely to result in a substantial change in views from I-5. Changes to the element would result in less-than-significant impacts on aesthetic resources.

Conservation and Open Space Element

The proposed 2014 General Plan Conservation and Open Space Element updates, analyzed under Impact AES-1, would generally affect aesthetic resource associated with I-5 in a positive manner by preserving and limiting impacts on existing resources such as habitat areas, potentially creating protected scenic corridors, and helping to retain existing park areas. Under the current provisions of the General Plan, future renewable energy projects such as photovoltaic arrays or wind energy turbines could affect scenic values if located where they could be seen from I-5. The precise level of impact would be disclosed in future CEQA analyses of these projects. The Project would not change the level of intensity that may result from such future projects. In general, design standards, topography, and distances are considered likely to ensure that impacts would be less than significant.

Safety Element

The proposed 2014 General Plan Safety Element updates, analyzed under Impact AES-1, would generally not impact aesthetic resources associated with I-5 because they would mainly affect private rural drives and public places that are not visually accessible from the freeway.

Airport Land Use Compatibility Plan

The Crows Landing Airport AIA overlaps with I-5. While most views of the airport are limited by rolling terrain that borders the freeway to the east, the terrain and lack of trees, shrubs, and development do allow for some direct views of the airfield. As analyzed under Impact AES-1, Airport Protection Policies 3.4.2 and 3.4.3 would benefit and aid in the protection of aesthetic resources in associated AIAs by limiting the amount of vertical infrastructure permitted in AIAs, while also limiting future sources of dust, steam, or smoke that may impair pilots' vision. These policies would benefit aesthetic resources by limiting structure heights and sources dust, steam, or smoke in the Crows Landing AIAs that includes, and thereby affects views from, portions of I-5. The ALUCP for Crows Landing Air Facility has not been updated; therefore, the extent to which its policies may limit the impact of future re-use of the airfield is unknown. Because it will not restrict all new aviation-related improvements and some of those may be visible from I-5, it is reasonable to assume that the redevelopment of the Crows Landing Air Facility as a regional jobs center could result in visual changes that could be seen from I-5. However, as discussed above in Impact AES-1, changes to the facility will be perceived from viewers on I-5 as distant background changes and result in less than significant impacts.

Summary

Changes in the environment associated with the 2014 General Plan updates would not result in significant impacts on aesthetic resources associated with I-5.

Significance without Mitigation: Less than significant (no mitigation required)

Impact AES-3: Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area (significant and unavoidable)

Land Use Element

Proposed 2014 General Plan Land Use Element updates, analyzed under Impact AES-1, would result in direct and indirect visual impacts associated with light and glare because future development consistent with the general plan as amended by the project has the potential to result in either positive or negative impacts on existing levels of light and glare depending upon the existing land use and proposed change. Existing rural and agricultural areas emit very low levels of light and glare, except in locations where agricultural industry is present. Some aspects of the General Plan update would result in new development in rural areas that would introduce new sources of light and glare into a relatively dark area. For example, establishment of a jobs center at the Crows Landing Air Facility would result in a substantial new source of light. As described above, most of these impacts are not directly attributable to the 2014 General Plan updates and would result from build-out of the General Plan as it currently exists.

The 2014 General Plan updates include the following policy and implementation measures that reduce significant impacts associated with light and glare.

GOAL TWO. Ensure compatibility between land uses.

POLICY SIXTEEN. Outdoor lighting shall be designed to be compatible with other uses.

IMPLEMENTATION MEASURES

1. Develop light and glare standards to ensure that artificial outdoor lighting is efficient and focused on achieving safety and security requirements for the associated land use.

2. Outdoor lighting shall be required to provide minimum impact to the surrounding environment and will, where feasible, utilize downcast, cut-off type fixtures that are shielded and direct the light only towards objects requiring illumination.

Future land use changes resulting from implementation of the General Plan, including the updates, would affect rural vista views, views from I-5, and all viewer groups. The specific level of this impact cannot be known at this time, absent site-specific development proposals. Although future development projects, such as the reuse of the Crows Landing Air Facility, will be subject to their own CEQA analyses and mitigation, there is a potential for large projects to have a significant effect. Policy Sixteen and associated implementation measures under Goal Two would reduce these impacts to a less than significant level.

Circulation Element

The proposed 2014 General Plan Circulation Element updates, analyzed under Impact AES-1, could also result in light and glare impacts by widening roadways and combining modes of transportation that would increase the number of sources of nighttime light such as street and intersection lighting, and traffic signals. As described above, most of these impacts are not directly attributable to the 2014 General Plan updates and would result from build-out of the General Plan as it currently exists. Policy Eight and associated implementation measures under Goal Two would reduce these impacts to a less than significant level.

Conservation and Open Space Element

The proposed 2014 General Plan Conservation and Open Space Element updates, analyzed under Impact AES-1, would generally affect light and glare impacts in a positive manner by preserving and limiting impacts on existing resources such as habitat areas and by helping to retain existing parks and their associated vegetation.

Safety Element

The proposed 2014 General Plan Safety Element updates, analyzed under Impact AES-1, could result in light and glare impacts by requiring more wide open and well-lit public places that would increase available surfaces to create glare and new sources of nighttime lighting. Policy Eight and associated implementation measures under Goal Two would reduce these impacts below the level of significance.

Airport Land Use Compatibility Plan

As analyzed under Impact AES-1, the most significant revisions that would affect impacts associated with light and glare are associated with Airport Protection Policy 3.4.2, which includes object marking and lighting to be installed as directed by the FAA aeronautical study or the California Division of Aeronautics, and Airport Protection Policy 3.4.3, which would affect aesthetic resources by restricting sources of glare (e.g., mirrored or highly reflective surfaces) and bright or distracting lights (e.g., search lights, stadium lights, and laser light displays) that may impair pilots' vision. While safety lighting could slightly increase lighting associated AIAs, it is not anticipated to result in substantial increases in lighting compared to existing conditions.

Summary

Changes associated with the 2014 General Plan updates would indirectly result in light and glare impacts. However, with inclusion of new Land Use Element Policy Sixteen, Implementation

Measures 1 and 2 under Goal Two, the impact would be reduced. However, the impact would remain significant and unavoidable.

Significance: Significant and unavoidable (no mitigation available)

3.1.4 References Cited

Printed References

California Department of Transportation. 2014a. *Officially Designated State Scenic Highways*. Available: <http://www.dot.ca.gov/hq/LandArch/scenic/schwy.htm>. Last updated: October 14, 2013. Accessed: December 22, 2014.

———. 2014b. *Scenic Highway Guidelines*. Available: http://www.dot.ca.gov/hq/LandArch/scenic/guidelines/scenic_hwy_guidelines_04-12-2012.pdf. Last updated: April 12, 2012. Accessed: December 22, 2014.

Stanislaus County. 2004. *Airport Land Use Commission Plan*. Adopted: August 3, 1978. Amended: May 20, 2004. Stanislaus County, CA.

———. 2014. *Title 21 ZONING*. Available: <http://qcode.us/codes/stanislauscounty/view.php?topic=21&frames=off>. Accessed: January 5, 2015.

3.2 Agricultural Resources

3.2.1 Introduction

This section discusses the impacts of the plan updates with respect to agricultural resources. It lists the thresholds of significance that form the basis of the environmental analysis, describes the study area and major sources used in the analysis, provides environmental setting information that is relevant to agricultural resources, and assesses whether the plan updates would result significant impacts with respect to these resources.

Study Area

The agricultural resources study area for the EIR is defined as unincorporated Stanislaus County.

3.2.2 Environmental Setting

This section describes the state and local regulations and policies that are applicable to the plan updates and the existing conditions pertaining to agricultural resources in the study area. The existing conditions constitute the baseline for this environmental analysis.

Regulatory Setting

This section describes the state and local regulations related to agricultural resources that would apply to the plan updates. There are no relevant federal regulations that apply to agricultural resources. Therefore, only state, regional, and local regulations are described below.

State

California Land Conservation Act of 1965 and Farmland Security Zone Act

The California Land Conservation Act of 1965 (Government Code Section 51200, et seq.), also known as the Williamson Act, protects farmland from conversion to other uses by offering owners of agricultural land a property tax incentive to maintain their land in agricultural use. Under the Williamson Act, the landowner contracts with the county (or city) in which their property is located, promising to maintain the land in agricultural or a compatible use for a minimum period of 10 years. In return, the property tax on the land is based on its productive value rather than its assessed value. A Williamson Act contract automatically self-renews each year so that it is always 10 years in duration. Enrollment in a Williamson Act contract is completely voluntary. Williamson Act participation can help to insulate agricultural land from increases in property taxes linked to improvements. The Farmland Security Zone Act (Government Code Section 51296, et seq.) works similarly. However, it applies to contracted land for a term of no less than 20 years.

The Williamson Act and Farmland Security Zone Act programs are administered locally. The county is a party to and enforces the contracts on lands within its unincorporated area. The California Department of Conservation has a limited oversight role that focuses primarily on the cancellation of contracts.

Separate from the Williamson Act, landowners may voluntarily enter into a form of deed restriction known as an Agricultural Conservation Easement (ACE) that effectively removes in perpetuity the land's potential for development. ACEs are held by either land trusts or local governments. Those entities are responsible for ensuring that the terms of the easement are upheld. The landowner can donate the easement to the easement holder, sell it to them at a mutually agreeable price, or a combination of the two.

In 2010, the county reported that it held 689,954 acres of land under Williamson Act contracts and 156 acres of land under an ACE, as shown in Table 3.2-1. The county does not have any land under the Farmland Security Zone Act program.

Table 3.2-1. Stanislaus County Williamson Act Acreage, 2010

Williamson Act		Agricultural Conservation Easement		Total
Prime	Nonprime	Prime	Nonprime	
293,495	396,459	156	0	690,110

Source: California Department of Conservation 2013a.

Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) is a non-regulatory program of the California Department of Conservation that inventories the state's important farmlands and tracks the conversion of farmland to other land uses. The FMMP publishes reports of mapped farmland and conversions every 2 years. The FMMP categorizes farmland according to its soil quality, availability of irrigation water, current use, slope, and other criteria. The categories of farmland identified in the FMMP are listed below. The FMMP considers all of these categories, except Grazing Land, to be Important Farmland.

- **Prime Farmland.** Farmland with the best combination of physical and chemical features and able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Farmland of Statewide Importance.** Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Unique Farmland.** Farmland with lesser quality soils but still useful for the production of the state's leading agricultural crops. This land is usually irrigated but may include the nonirrigated orchards or vineyards found in some climatic zones of California. Land must have been cropped at some time during the 4 years prior to the mapping date.
- **Farmland of Local Importance.** Land of importance to the local agricultural economy, as determined by each county's board of supervisors and a local advisory committee.
- **Grazing Land.** Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups that are interested in grazing activities.

The FMMP also identifies non-agricultural lands.

- **Urban and Built-Up Land.** Land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. Common examples include residential, industrial, and commercial uses; institutional facilities; cemeteries; airports; golf courses; sanitary landfills; sewage treatment plants; and water control structures.
- **Other Land.** Land not included in any other mapping category. Common examples include low-density rural developments, brush, timber, wetlands, and riparian areas that are not suitable for livestock grazing, confined livestock, poultry, or aquaculture facilities, strip mines, borrow pits, or water bodies smaller than 40 acres. Vacant and non-agricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

FMMP data can be useful when analyzing whether agricultural conversion is occurring within the county, how that conversion is occurring, and at what rate.

California Farmland Conservancy Program

The California Farmland Conservancy Program (CFCP) seeks to encourage long-term private stewardship of agricultural lands through the voluntary use of ACEs. The CFCP provides grant funding for easement and planning projects that support agricultural land conservation statewide. As of January 2014, the CFCP had funded 172 conservation easements in California's agricultural regions, permanently conserving some of the state's best farmland.

Local

Stanislaus County Local Agency Formation Commission (Agriculture Preservation Policy)

The Stanislaus County Local Agency Formation Commission is established under the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code Section 56000, et seq.). The job of the commission is to "review and approve with or without amendment, wholly, partially, or conditionally, or disapprove proposals for changes of organization or reorganization, consistent with written policies, procedures, and guidelines adopted by the commission." (Government Code Section 56375) This gives the commission exclusive power to consider city incorporations, city annexations, the creation of or addition to special districts. Government Code Section 56377 requires the commission to minimize impacts on open space lands, including agricultural lands, as follows:

In reviewing and approving or disapproving proposals which could reasonably be expected to induce, facilitate, or lead to the conversion of existing open-space lands to uses other than open-space uses, the commission shall consider all of the following policies and priorities:

(a) Development or use of land for other than open-space uses shall be guided away from existing prime agricultural lands in open-space use toward areas containing nonprime agricultural lands, unless that action would not promote the planned, orderly, efficient development of an area.

(b) Development of existing vacant or nonprime agricultural lands for urban uses within the existing jurisdiction of a local agency or within the sphere of influence of a local agency should be encouraged before any proposal is approved which would allow for or lead to the development of existing open-space lands for non-open-space uses which are outside of the existing jurisdiction of the local agency or outside of the existing sphere of influence of the local agency.

The Stanislaus Local Agency Formation Commission (LAFCO) has adopted an Agricultural Preservation Policy ("Policy") that provides evaluation standards for review of proposals that could induce or lead to the conversion of agricultural lands. The Policy requires that applicants prepare a Plan for Agricultural Preservation that details the impacts on agricultural resources and identifies the method or strategy selected to minimize the loss of agricultural lands. The Policy sets forth three agricultural preservation strategies that the Commission encourages: 1:1 mitigation (that can also be achieved through in-lieu fees), reduction of an existing sphere of influence that contains agricultural lands, and voter-approved urban growth boundaries. In recognition of the County's requirements that 1:1 mitigation apply to conversion of agricultural lands to residential uses, LAFCO's Policy also allows for 1:1 mitigation to be focused on similar conversions.

Stanislaus County Williamson Act Program

The Stanislaus County Department of Planning and Community Development cannot take action on any application for a new structure or use on a parcel restricted by a Williamson Act contract until such time as sufficient evidence is presented to the county and/or the California State Department of Conservation that the proposed new use is compatible with the Williamson Act contract. A landowner may opt to discontinue their contract by filing a notice of non-renewal with the county. In these cases, the contract would expire 10 years after the filing. The county may also cancel a Williamson Act contract without the 10-year expiration period but only under limited circumstances and subject to mandatory findings of fact that those circumstances exist.

In Stanislaus County, the uses compatible with Williamson Act contracts are listed in the General Agricultural (A-2) zoning district. They include: gas, electric, water, communication facilities; farm labor camps and farm employee housing; certain agricultural industries; agricultural service airports; and produce markets. (Stanislaus County Code Sections 21.20.030 and 21.20.045)

Stanislaus County General Plan, Agricultural Element

In recognition of the importance of agriculture to the 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 consistent with the entire general plan. It interacts primarily with the agriculture-related policies of the Land Use, Conservation/Open Space, and Housing Elements. To avoid duplication, policies in those elements that affect or relate to agriculture are not repeated in this element. However, such policies are cross-referenced whenever appropriate. The Agricultural Element's policies have the same legal status as any other element of the general plan.

The following are goals and policies pertinent to the proposed plan updates.

GOAL ONE. Strengthen the agricultural sector of our economy.

OBJECTIVE 1.1. Enhance the marketing and promotion of agriculture in Stanislaus County.

POLICY 1.1. Efforts to promote the location of new agriculture-related business and industry in Stanislaus County shall be supported.

OBJECTIVE 1.2. Support the development of agriculture-related uses.

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.

OBJECTIVE 1.3. Minimizing Agricultural Conflicts.

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.

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.

POLICY 1.11. The County shall support state regulations requiring landowners to manage noxious weeds and pests on fallow or abandoned lands.

OBJECTIVE 1.4. Provide Housing for Farmworkers

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.

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.

OBJECTIVE 1.7. Encourage Regional Coordination in the Central Valley

POLICY 1.22. The County shall encourage regional coordination of planning and development activities for the entire Central Valley.

GOAL TWO. Conserve our agricultural lands for agricultural uses.

OBJECTIVE 2.1. Continued Participation in the Williamson Act

POLICY 2.1. The County shall continue to provide property tax relief to agricultural landowners by participating in the Williamson Act.

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.

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.

OBJECTIVE 2.2. Discourage Urbanization and the Conversion of Agricultural Land in Unincorporated Areas of the County.

POLICY 2.4. To reduce development pressures on agricultural lands, higher density development and in-filling shall be encouraged.

POLICY 2.5. To the greatest extent possible, development shall be directed away from the County's most productive agricultural areas.

POLICY 2.6. Agricultural lands restricted to agricultural use shall not be assessed to pay for infrastructure needed to accommodate urban development.

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.

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.

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.

POLICY 2.10. Minimum parcel sizes allowed for lands designated Agriculture shall not promote the expansion of existing, or creation of new, ranchette areas.

OBJECTIVE 2.3. Expansion of Cities and Unincorporated Communities.

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.

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.

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.

OBJECTIVE 2.4. Assessing and Mitigating Impacts of Farmland Conversion.

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.

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 "Agriculture" 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.

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.

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.

OBJECTIVE 2.5. Limit the Impact of Antiquated Subdivisions

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.

GOAL THREE. Protect the natural resources that sustain our agricultural industry.

OBJECTIVE 3.3. Soil Resources

POLICY 3.6. The County shall encourage the conservation of soil resources.

County Measure E

Stanislaus County voters passed Measure E in November 2007. Under Measure E, land that is designated as agricultural or open space in the Land Use Element cannot be amended to residential or rezoned to residential without the approval of a majority of county voters. Because Measure E amended the county general plan, it affects unincorporated lands that are under the county's jurisdiction. Under California law, a general plan amendment that is adopted by voter-approved initiative can be changed only by approval of another initiative.

Measure E is intended to direct residential growth into the incorporated cities, which are more capable of serving such growth, and limit the potential for residential growth to convert agricultural land within the unincorporated areas. Its immediate effect is to restrict future residential developments within the unincorporated county to those areas that are currently designated and zoned for residential development (e.g., Salida and Diablo Grande). Measure E will remain in effect until December 31, 2036, unless it is otherwise amended by a future voter initiative.

Existing Conditions

Stanislaus County is located at the northern end of the San Joaquin Valley. It is traversed from north to south by Interstate 5 and State Route 99, California's main freeways for connecting Northern and Southern California. The Bay Area is located within commuting distance to the west. Much of the pressure for converting agricultural land to urban use in Stanislaus County derives from the high cost of housing in the Bay Area.

Although the county's economy is diversifying, its economic base remains predominantly agricultural. Agricultural land constitutes approximately 85% of all land in the county (California Department of Conservation 2013b). Table 3.2.2 summarizes the various agricultural, urban, and other land uses in Stanislaus County in 2010 and 2012, as compiled by the Department of Conservation. These acreages are for Stanislaus County as a whole, including both incorporated and unincorporated areas.

Table 3.2.2. Stanislaus County Land Uses, in Acres

Land Use Category	Acreage Inventoried	
	2010	2012
Prime Farmland	253,434	251,723
Farmland of Statewide Importance	31,475	31,765
Unique Farmland	87,524	95,187
Farmland of Local Importance	31,366	31,331
Grazing Land	429,545	422,477
Ag Land Subtotal	833,344	832,453
Urban and Built-up Land	64,529	64,822
Other Land	64,830	65,428
Water Area	7,465	7,465
Total Land Inventoried	970,168	970,168

Source: California Department of Conservation 2013b.

The importance of agriculture to Stanislaus County is demonstrated in the value of its agricultural production. In 1993, local crops were valued at \$1 billion. In 2012, the total value of Stanislaus County crops was estimated to be approximately \$3.28 billion (California Department of Food and Agriculture 2014). The county's top-five farm products, in order of revenue, are almonds, milk, walnuts, cattle and calves, and chickens. In 2012, Stanislaus County ranked sixth in total agricultural revenue among California's 58 counties (California Department of Food and Agriculture 2014).

In large part, the important farmlands located within the county's unincorporated area are currently zoned for agricultural use. Those that are so zoned are protected from conversion to residential developments by the provisions of Measure E.

3.2.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan updates; discusses the individual impacts relative to the thresholds of significance; discusses mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and indicates the overall significance of the impact with mitigation incorporated.

Major Sources Used in Analysis

The major sources used in this analysis are listed below:

- California Department of Conservation, Division of Land Resource Protection. *The California Land Conservation Act, 2012 Status Report*. October 2013.
- California Department of Conservation, Farmland Mapping and Monitoring Program. *Table A-41, Stanislaus County 2010–2012 Land Use Conversion*. October 2013.
- California Department of Conservation, Farmland Mapping and Monitoring Program. *Stanislaus County 2004–2012 Land Use Summary*.
- California Department of Food and Agriculture. *California Agricultural Statistics Review, 2013–2014, County Statistical Data*.

- Stanislaus County General Plan, Agricultural Element (including Appendix B, Agricultural Mitigation Policies).

Approach and Methodology

This analysis addresses the project's short- and long-term adverse impacts on the physical (i.e., natural and built) environment, assuming that the project will be built out. Existing conditions are the baseline against which the significance of the project's potential impacts on agricultural land are evaluated. Therefore, the reasonably foreseeable impacts of the plan updates are compared with the existing environment and not the provisions of the existing general plan and zoning ordinance. The FMMP's most recent available census of agricultural land use is 2012. That year is used as the baseline for this analysis.

Because the project does not propose any site-specific development activities, this analysis focuses on potential indirect impacts of future development that could occur as a result of the project.

Thresholds of Significance

Based on State CEQA Guidelines, Appendix G, the plan updates would have a significant impact with respect to agricultural resources if they would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural use.
- Conflict with existing zoning for agricultural use or a Williamson Act contract.
- Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g]).
- Result in the loss of forestland or conversion of forestland to non-forest use.
- Involve other changes in the existing environment that, because of their location or nature, could result in the conversion of farmland to non-agricultural use or the conversion of forestland to non-forest use.

Impacts and Mitigation Measures

Impact AGR-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural use (less than significant)

The Stanislaus County General Plan update and the Airport Land Use Compatibility Plan (ALUCP) update are not typical development projects in that they would not result in a direct physical change in the environment. The uses that would be allowable under the general plan consistent with the updated objectives and policies that make up the project may indirectly affect the environment. As illustrated in Table 3.2-2, a small amount of agricultural land is converted countywide each year as a result of suburbanization or land being removed from production. The project does not propose any changes to the county general plan's land use map or general plan amendments that would result in additional conversions of agricultural lands, nor are any changes proposed to the ALUCP that would preclude agricultural uses. The project includes changes to reflect current legislation, regulatory

codes (including Caltrans' *Airport Land Use Planning Handbook*), and local standards as well as some minor revisions to general plan language and policy improvements.

The project proposes several changes to the language in the Land Use Element of the general plan that would be protective of agricultural lands.

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY SIX. Preserve and encourage upgrading of existing unincorporated urban communities.

IMPLEMENTATION MEASURES

3. Land within the sphere of influence of a community services district, sanitary district or domestic water district shall be rezoned for development only if ~~the US (Urban Service) combining district is used~~ capacity for connecting to available public services exists and any resulting projects are conditioned to require connection to available services.
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.

References to Urban Services zoning districts would be eliminated; instead, references to Urban Services zoning districts would provide that land within the sphere of influence of a community services district, sanitary district, or domestic water district would be rezoned for development only if capacity for connecting to available public services exist. New policy language would be added that would require, when feasible, new development to be designed and built to allow for the upgrading or expansion of services necessary to upgrade existing unincorporated urban communities. This will limit the premature conversion of agricultural land in advance of the availability of urban services.

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY SEVEN. Riparian habitat along the rivers and natural waterways of Stanislaus County shall to the extent possible be protected.

IMPLEMENTATION MEASURE

1. All requests for development which require discretionary approval and include lands adjacent to or within riparian habitat shall include measures for protecting that habitat to the extent that such protection does not pose threats to proposed site uses, such as airports.

This added language emphasizes that all requests for development that require discretionary approval and include lands adjacent to or within riparian habitat would include measures for protecting that habitat to the extent that such protection does not pose threats to proposed site uses, such as airports. This will protect lands on the boundaries of agricultural areas.

Updates to general plan land use language would not result in the conversion of existing farmland.

GOAL THREE. Foster stable economic growth through appropriate land use policies.

POLICY TWENTY-TWO. Support and facilitate efforts to develop and promote economic development and job creation centers throughout the County.

IMPLEMENTATION MEASURE

1. While supporting efforts to direct economic development and job creation centers towards incorporated areas, the County shall also consider approval of centers in unincorporated areas of unique character and proximity to transportation infrastructure.

This policy and measure supports economic development and job creation by directing economic development and job creation centers toward incorporated areas. If centers are not approved in the incorporated areas, the county would also consider approving centers in unincorporated areas of unique character with proximity to transportation infrastructure.

Additionally, several policies and implementation measures in the Land Use Element regarding development within public water districts and/or wastewater districts would be adopted. Several policies about complementing the general plans of cities within the county would also be included in the Land Use Element as well as a policy that would address county support for a growth management strategy that is equitable to the needs of the county and all nine cities. Similarly, the general policy statement regarding “community plans” would be amended to specify that any requests for rezoning within a community plan area must be consistent with the proposed use category on the community plan and processed as a general plan amendment. This goal and associated policy and implementation measure direct new development to those areas with available services and away from productive farmland.

GOAL SIX. Promote and protect healthy living environments.

POLICY TWENTY-NINE. Support the development of a built environment that is responsive to decreasing air and water pollution, reducing the consumption of natural resources and energy, increasing the reliability of local water supplies, and reduces vehicle miles traveled by facilitating alternative modes of transportation, and promoting active living (integration of physical activities, such as biking and walking, into everyday routines) opportunities.

POLICY THIRTY-ONE. 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.

As above, this policy will limit the potential for urban uses, such as health care facilities, to convert agricultural land in advance of the availability of urban services.

Finally, the “commercial” general plan designation would be amended to allow residential development in limited situations or when connected to both public sewer and water service.

These Land Use Element changes are all consistent with and supportive of the Stanislaus County General Plan’s Agricultural Element and the other existing policies to protect and preserve farmland within the county.

GOAL TWO. Conserve our agricultural lands for agricultural uses.

OBJECTIVE 2.2. Discourage urbanization and the conversion of agricultural land in unincorporated areas of the County.

POLICY 2.5. To the greatest extent possible, development shall be directed away from the County's most productive agricultural areas.

IMPLEMENTATION MEASURE

3. The County shall encourage the development of alternative energy sources on lands located outside “Most Productive Agricultural Areas”.

Alternative energy sources may include solar energy or wind energy collectors installed on a commercial scale. This could result in the conversion of farmland to non-agricultural uses, but only farmland that is not "most productive." No such limitation exists in the current General Plan.

Existing Implementation Measure 1 under Objective 2.2, Policy 2.5 states:

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.

Proposed Implementation Measure 3, taken together with Implementation Measure 1, will ensure that alternative energy development does not occur on the county's most productive agricultural land. Therefore, this would not have a significant impact on agriculture.

GOAL THREE. Protect the natural resources that sustain our agricultural industry.

OBJECTIVE 3.2. Water Resources.

POLICY 3.4. The County shall encourage the conservation of water for both agricultural, rural domestic, and urban uses.

IMPLEMENTATION MEASURE

5. The County shall encourage the development and use of appropriately treated water (reclaimed wastewater and stormwater) for both agricultural and urban irrigation.

This measure would not have an impact on agriculture.

POLICY 3.6. The County will continue to protect local groundwater for agricultural, rural domestic, and urban use in Stanislaus County.

IMPLEMENTATION MEASURE

1. The County shall implement the existing groundwater ordinance to ensure the sustainable supply and quality of local groundwater.

This policy and measure would help retain viable agricultural uses by protecting groundwater resources. It would not have an impact on agriculture.

The proposed ALUCP update for Modesto City/County Airport and Oakdale Municipal Airport has been coordinated with the general plan update. The proposed changes to the ALUCP for Modesto City/County Airport include updating noise contours for a smaller area, updating the size and configuration of safety zones based on changes in airport operations and new guidance, and including overflight policies for the first time. Similar changes are proposed for Oakdale Municipal Airport. Changes to the ALUCP pertaining to Oakdale Municipal Airport include defining noise contours for the first time, including new safety zones to reflect California Department of Transportation (Caltrans) guidance, and including overflight policies. The ALUCP would establish an expanded Airport Influence Area (AIA) adjacent to Modesto City/County Airport that would expand

its influence and therefore affect more homes than the current ALUCP does. However, the proposed changes would be unlikely to result in the conversion of existing farmland, given that the changes to the AIA would not affect existing development, only future development, by limiting how close to the airport the development occurs. All other changes are policy changes that would not affect existing farmland and therefore would have a less-than-significant impact regarding the conversion of existing farmland within the county.

The general plan update does not propose new zoning or changes to the land use map or the existing boundaries of the land use designations. Additionally, the ALUCP proposes changes to policies that would not affect current land use patterns. Furthermore, any development projects proposed in agricultural areas of the county would continue to be reviewed for consistency, thereby ensuring that they would not lead to the conversion of land from agricultural use to residential, commercial, or other uses that would be inconsistent with existing agricultural production. This review includes abiding by county Measure E, which requires a majority of voters to approve the rezoning or redesignation of land uses from agricultural to residential. Therefore, the project would have a less-than-significant impact, and no mitigation is required.

The impact would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact AGR-2: Conflict with existing zoning for agricultural use or a Williamson Act contract (less than significant)

The proposed updates to the general plan and the ALUCP would not change the land use designation or zoning of land that is currently zoned for agricultural use, nor would the updates directly affect land that is under an existing Williamson Act contract. The proposed updates would not conflict with the existing policies and procedures in the Stanislaus County General Plan's Agricultural Element, the county's Williamson Act program, or Stanislaus County LAFCO's agriculture preservation policy. Preserving existing agricultural land is still an important goal of the county. These plan updates would not conflict with existing policies to protect agricultural land.

The impact would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact AGR-3: Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g]) (less than significant)

Stanislaus County does not include lands zoned for forestland or timberland; therefore, no impacts on these resources would occur.

Significance without Mitigation: Less than significant (no mitigation required)

Impact AGR-4: Result in the loss of forestland or conversion of forestland to non-forest use (less than significant)

Stanislaus County does not include forestland; therefore, the proposed plan updates would not result in the loss of forestland or conversion of forestland to non-forest use.

Significance without Mitigation: Less than significant (no mitigation required)

Impact AGR-5: Involve other changes in the existing environment that, because of their location or nature, could result in the conversion of farmland to non-agricultural use or the conversion of forestland to non-forest use (less than significant)

The proposed update to the county's general plan and the ALUCP do not include any additional changes that, because of their location or nature, could result in the conversion of farmland to non-agricultural use or the conversion of forestland to non-forest use. None of the general plan policy amendments are site specific. The county does not include forestlands, and as general plan implementation occurs, the project would not propose general plan amendments that would result in additional conversions of agricultural lands. The general plan is not a development project in itself but, rather, a policy document that will guide development in the county in the years ahead. None of the policies or updates to the general plan or the ALUCP would conflict with state and local policies that are in place to preserve the county's existing farmland. These policies, namely the Stanislaus County General Plan's Agricultural Element and the Williamson Act program, are in place to help preserve existing farmland. Stanislaus County LAFCO's agricultural preservation policy and county Measure E both have been put in place to protect the county's agricultural land from the pressures of residential development due to the county's commuting proximity to the San Francisco Bay Area. The proposed plan updates are supportive of, and do not conflict with, these policies. Therefore, impacts would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

3.2.4 References Cited

Printed References

- California Department of Conservation. 2013a. *Table A-41, Stanislaus County 2010–2012 Land Use Conversion*. Farmland Mapping and Monitoring Program. October.
- . 2013b. *The California Land Conservation Act, 2012 Status Report*. Division of Land Resource Protection. October.
- . 2013. *Stanislaus County 2004–2012 Land Use Summary*. Farmland Mapping and Monitoring Program.
- California Department of Food and Agriculture. 2014. *California Agricultural Statistics Review, 2013–2014 County Statistical Data*.
- Stanislaus County. 2007. *Agricultural Element of the Stanislaus County General Plan*.

3.3 Air Quality

3.3.1 Introduction

This chapter discusses the impacts of the plan updates with respect to air quality. It lists the thresholds of significance that form the basis of the environmental analysis, describes the air quality study area and major sources used in the analysis, provides environmental setting information that is relevant to air quality, and assesses whether the plan updates would result significant impacts with respect to air quality.

Study Area

The study area for air quality is the San Joaquin Valley Air Basin (SJVAB).

3.3.2 Environmental Setting

This section describes the federal, state, regional, and local regulations and policies that are applicable to the plan updates, and the existing conditions pertaining to air quality in the study area. The existing conditions constitute the baseline for this environmental analysis. It begins with a review of air pollutants and related air quality issues.

Criteria Pollutants

The federal and state governments have established national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS), respectively, for six criteria pollutants: ozone, carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and particulate matter (PM), which consists of PM 10 microns in diameter or less (PM10) and PM 2.5 microns in diameter or less (PM2.5). The following section discusses the criteria pollutants, as well as additional air pollutants of concern, toxic air contaminants, and asbestos.

Ozone and NO₂ are considered regional pollutants because they (or their precursors¹) affect air quality on a regional scale. NO₂ reacts photochemically² with reactive organic gases (ROGs) to form ozone, and this reaction occurs at some distance downwind of the source of pollutants. Pollutants such as CO, SO₂, and Pb are considered to be local pollutants that tend to accumulate in the air locally. Particulate matter is considered to be both a local and a regional pollutant.

The primary pollutants of concern in the study area are ozone (including nitrogen oxides), CO, and particulate matter. Principal characteristics surrounding these pollutants are discussed below. Toxic air contaminants (TACs) are also discussed, although no air quality standards exist for these pollutants.

¹ A “precursor” is an air pollutant that combines with others to form ozone.

² A photochemical reaction occurs in the presence of light and heat.

Ozone

Ozone is a respiratory irritant that can cause severe ear, nose, and throat irritation and increases susceptibility to respiratory infections. It is also an oxidant that causes extensive damage to plants through leaf discoloration and cell damage. It can cause substantial damage to other materials as well, such as synthetic rubber and textiles.

Ozone is not emitted directly into the air but is formed by a photochemical reaction in the atmosphere. Ozone precursors—ROG and nitrogen oxides (NO_x)—react in the atmosphere in the presence of sunlight to form ozone. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer air pollution problem. The ozone precursors, ROG and NO_x, are mainly emitted by mobile sources and by stationary combustion equipment.

Hydrocarbons are organic gases that are made up of hydrogen and carbon atoms. There are several subsets of hydrocarbons, including ROGs and volatile organic compounds (VOCs). ROGs are defined by state rules and regulations; VOCs are defined by federal rules and regulations. For the purposes of this assessment, hydrocarbons are classified and referred to as ROGs. Both ROGs and VOCs are emitted during the incomplete combustion of hydrocarbons or other carbon-based fuels, or as a product of chemical processes. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry-cleaning solutions, and paint (through evaporation).

The health effects of hydrocarbons result from the formation of ozone. High levels of hydrocarbons in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons are considered TACs. There are no separate health standards for ROGs, although some are also toxic; an example is benzene, which is both a ROG and a carcinogen.

Nitrogen Oxides

Nitrogen oxides are a family of highly reactive gases that are a primary precursor to the formation of ground-level ozone and react in the atmosphere to form acid rain. Nitrogen dioxide (NO₂) is a brownish, highly reactive gas that is present in all urban environments. The major human sources of NO₂ are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit primarily nitrous oxide (NO), which reacts through oxidation in the atmosphere to form NO₂ (U.S. Environmental Protection Agency 2012a). The combined emissions of NO and NO₂ are referred to as NO_x and reported as equivalent NO₂. Because NO₂ is formed and depleted by reactions associated with ozone, the NO₂ concentration in a particular geographical area may not be representative of local NO_x emission sources.

Inhalation is the most common route of exposure to NO₂. Because NO₂ has relatively low solubility in water, the principal site of toxicity is in the lower respiratory tract. The severity of the adverse health effects primarily depends on the concentration inhaled rather than the duration of exposure. An individual may experience a variety of acute symptoms, such as coughing, difficulty breathing, vomiting, headache, and eye irritation during or shortly after exposure. After a period of approximately 4–12 hours, an exposed individual may experience chemical pneumonitis or pulmonary edema with breathing abnormalities, cough, cyanosis, chest pain, and rapid heartbeat. Severe symptomatic NO₂ intoxication after acute exposure has been linked to prolonged respiratory

impairment, with such symptoms as chronic bronchitis and decreased lung function (U.S. Environmental Protection Agency 2012a).

Carbon Monoxide

CO has little effect on plants and materials, but it can have significant effects on human health. CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. Effects range from slight headaches to nausea to death.

Motor vehicles are the primary source of CO emissions in most areas. In Stanislaus County, high CO levels are of greatest concern during the winter, when periods of light winds combine with the formation of ground-level temperature inversions from evening through early morning. These conditions trap pollutants near the ground, reducing the dispersion of vehicle emissions. Moreover, motor vehicles exhibit increased CO emission rates at low air temperatures. Dramatic reductions in CO levels across California have been witnessed during the past several decades, including a 50% decrease in statewide peak CO levels between 1980 and 2004. These reductions are primarily a result of California Air Resources Board (ARB) requirements for cleaner vehicles, equipment, and fuels (California Air Resources Board 2004:1).

Particulate Matter

Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter also forms when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. Particulate matter less than 10 microns in diameter, about 1/7th the thickness of a human hair, is referred to as PM10. Particulate matter that is 2.5 microns or less in diameter, roughly 1/28th the diameter of a human hair, is referred to as PM2.5. Major sources of PM10 include motor vehicles; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. PM2.5 results from fuel combustion (from motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, PM10 and PM2.5 can be formed in the atmosphere from gases such as SO₂, NO_x, and VOCs.

PM10 and PM2.5 pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. PM10 and PM2.5 can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances, such as lead, sulfates, and nitrates, can cause lung damage directly. These substances can be absorbed into the blood stream and cause damage elsewhere in the body; they can also transport absorbed gases such as chlorides or ammonium into the lungs and cause injury. Whereas particles 2.5 to 10 microns in diameter tend to collect in the upper portion of the respiratory system, particles 2.5 microns or less are so tiny that they can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, and contribute to haze and reduce regional visibility.

Toxic Air Contaminants

TACs are pollutants that may result in an increase in mortality or serious illness or that may pose a present or potential hazard to human health. ARB identifies particulate matter from diesel-fueled engines (DPM) as a TAC. Compared to other air toxics ARB has identified, DPM emissions are

estimated to be responsible for about 70% of the total ambient air toxics risk (California Air Resources Board 2000:1).

Naturally Occurring Asbestos (NOA)

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals. It has been mined for applications requiring thermal insulation, chemical and thermal stability, and high tensile strength. In addition to finding asbestos in older buildings, it is also found in its natural state (NOA).

Exposing or disturbing rock and soil that contains NOA can result in the release of fibers to the air and, consequently, public exposure. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (or serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, termolite, can be found associated with ultramafic rock, particularly near geologic faults. Bands of NOA, trending in a north-south direction, have been identified in the foothills in the western portion Stanislaus County (California Department of Conservation 2000). Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying facilities where ultramafic rock is present.

Exposure and disturbance of rock and soil that contain asbestos can result in the release of fibers to the air and consequent exposure to the public. Asbestos can result in a human health hazard when airborne. The inhalation of asbestos fibers into the lungs can result in a variety of adverse health effects, including inflammation of the lungs, respiratory ailments (e.g., asbestosis, which is scarring of lung tissue that results in constricted breathing), and cancer (e.g., lung cancer and mesothelioma, which is cancer of the linings of the lungs and abdomen).

Valley Fever

Valley Fever is not an air pollutant, but is a disease caused by inhaling *Coccidioides immitis* (*C. immitis*) fungus spores. The spores are found in certain types of soil and become airborne when the soil is disturbed. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Valley Fever symptoms generally occur within 2 to 3 weeks of exposure. Approximately 60% of Valley Fever cases are mild and display flu-like symptoms or no symptoms at all. Of those who are exposed and seek medical treatment, the most common symptoms are fatigue, cough, chest pain, fever, rash, headache, and joint aches. *C. immitis* is endemic to the Central Valley (U.S. Geological Survey 2000).

Regulatory Setting

This section summarizes federal, state, and local regulations that apply to air quality and greenhouse gas emissions (GHGs). The agencies of direct importance in the County are the U.S. Environmental Protection Agency (EPA), the ARB, and the San Joaquin Valley Air Pollution Control District (SJVAPCD). EPA has established federal air quality standards for which ARB and SJVAPCD have primary implementation responsibility. ARB and SJVAPCD are also responsible for ensuring that state air quality standards are met. It begins with a review of air pollutants and related air quality issues.

Federal

Clean Air Act and National Ambient Air Quality Standards

The federal Clean Air Act (CAA), promulgated in 1963 and amended several times thereafter, including the 1990 Clean Air Act amendments (CAAA), establishes the framework for modern air pollution control. The act directs EPA to establish NAAQS for the six criteria pollutants (discussed under the Environmental Setting section). The NAAQS are divided into primary and secondary standards; the former are set to protect human health within an adequate margin of safety, and the latter to protect environmental values, such as plant and animal life. Table 3.3-1 summarizes the NAAQS.

The CAA requires states to submit a state implementation plan (SIP) for areas in nonattainment for federal standards. The SIP, which is reviewed and approved by EPA, must demonstrate how the federal standards would be achieved. Failing to submit a plan or secure approval can lead to denial of federal funding and permits. In cases where the SIP is submitted by the state but fails to demonstrate achievement of the standards, EPA is directed to prepare a federal implementation plan.

State

California Clean Air Act and California Ambient Air Quality Standards

In 1988, the state legislature adopted the California Clean Air Act (CCAA), which established a statewide air pollution control program. CCAA requires all air districts in the state to endeavor to meet the CAAQS by the earliest practical date. Unlike the federal CAA, the CCAA does not set precise attainment deadlines. Instead, the CCAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. CAAQS are generally more stringent than the NAAQS and incorporate additional standards for sulfates (SO₄), hydrogen sulfide (H₂S), vinyl chloride (C₂H₃Cl), and visibility-reducing particles. The CAAQS and NAAQS are listed together in Table 3.3-1.

ARB and local air districts bear responsibility for achieving California's air quality standards, which are to be achieved through district-level air quality management plans that would be incorporated into the SIP. In California, EPA has delegated authority to prepare SIPs to ARB, which, in turn, has delegated that authority to individual air districts. ARB traditionally has established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs.

The CCAA substantially adds to the authority and responsibilities of air districts. The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The CCAA also emphasizes the control of "indirect and area-wide sources" of air pollutant emissions. The CCAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and to establish traffic control measures (TCMs).

Table 3.3-1. National and State Ambient Air Quality Standards

Pollutant	Symbol	Average Time	Standard (ppm)		Standard ($\mu\text{g}/\text{m}^3$)		Violation Criteria	
			California	National	California	National	California	National
Ozone*	O ₃	1 hour	0.09	-	180	-	If exceeded	-
		8 hours	0.070	0.075	137	147	If exceeded	If fourth-highest 8-hour concentration in a year, averaged over 3 years, is exceeded at each monitor in an area
Carbon monoxide (Lake Tahoe only)	CO	8 hours	9.0	9	10,000	10,000	If exceeded	If exceeded on more than 1 day per year
		1 hour	20	35	23,000	40,000	If exceeded	If exceeded on more than 1 day per year
		8 hours	6	-	7,000	-	If equaled or exceeded	-
Nitrogen dioxide	NO ₂	Annual arithmetic mean	0.030	0.053	57	100	If exceeded	If exceeded on more than 1 day per year
		1 hour	0.18	0.100	339	188	If exceeded	-
Sulfur dioxide	SO ₂	24 hours	0.04	0.14	105	365	If exceeded	-
		1 hour	0.25	0.075	655	196	If exceeded	If exceeded on more than 1 day per year
		3 hours	-	0.50*	-	1,300*	-	-
		Annual arithmetic mean	-	0.030	-	80	-	If exceeded on more than 1 day per year
Hydrogen sulfide	H ₂ S	1 hour	0.03	-	42	-	If equaled or exceeded	-
Vinyl chloride	C ₂ H ₃ Cl	24 hours	0.01	-	26	-	If equaled or exceeded	-
Inhalable particulate matter	PM ₁₀	Annual arithmetic mean	-	-	20	-	-	-
		24 hours	-	-	50	150	If exceeded	If exceeded on more than 1 day per year
		Annual arithmetic mean	-	-	12	12.0	-	If 3-year average from single or multiple community-oriented monitors is exceeded
	PM _{2.5}	24 hours	-	-	-	35	-	If 3-year average of 98 th percentile at each population-oriented monitor in an area is exceeded
Sulfate particles	SO ₄	24 hours	-	-	25	-	If equaled or exceeded	-
Lead particles	Pb	Calendar quarter	-	-	-	1.5	-	If exceeded no more than 1 day per year
		30-day average	-	-	1.5	-	If equaled or exceeded	-
		Rolling 3-month average	-	-	-	0.15	If equaled or exceeded	Averaged over a rolling 3-month period

Source: California Air Resources Board 2013a.

* = secondary standard.

ppm = parts per million.

 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.

Toxic Air Contaminant Regulation

California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). In the early 1980s, ARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The Toxic Air Contaminant Identification and Control Act (AB 1807) created California's program to reduce exposure to air toxics. AB 2588 supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

In August 1998, ARB identified particulate emissions from diesel-fueled engines as TACs. In September 2000, ARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles (California Air Resources Board 2000). The goal of the plan is to reduce diesel PM10 (respirable particulate matter) emissions and the associated health risk by 75% by 2010 and by 85% by 2020. The plan identifies 14 measures that target new and existing on-road vehicles (e.g., heavy-duty trucks and buses), off-road equipment (e.g., graders, tractors, forklifts, sweepers, and boats), portable equipment (e.g., pumps), and stationary engines (e.g., stand-by power generators). ARB will implement the plan over the next several years. The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. To date, ARB has identified 21 TACs, and has also adopted EPA's list of Hazardous Air Pollutants (HAPs) as TACs. In August 1998, diesel particulate matter (DPM) was added to the ARB list of TACs (California Air Resources Board 1998).

AB 2588 requires that existing facilities that emit toxic substances above specified levels take the following actions.

- Prepare a toxic emissions inventory.
- Prepare a risk assessment if emissions are significant (i.e., 10 tons per year or on District's Health Risk Assessment [HRA] list).
- Notify the public of significant risk levels.
- Prepare and implement risk reduction measures.

ARB has adopted several regulations that will reduce diesel emissions from in-use vehicles and engines throughout California. For example, ARB adopted an idling regulation for on-road diesel-fueled commercial vehicles in July 2004 and updated it in October 2005. The regulation applies to public and privately owned trucks with a Gross Weight Rating (GWR) greater than 10,000 pounds. Vehicles subject to the regulation are prohibited from idling for more than 5 minutes in any one location. ARB also adopted a regulation for operating diesel-powered construction and mining vehicles. Fleet owners are subject to retrofit or accelerated replacement/repower requirements for which ARB must obtain authorization from EPA prior to enforcement. The regulation also imposes a 5-minute idling limitation on owners, operators, and renters or lessees of off-road diesel vehicles. In some cases, the particulate matter reduction strategies also reduce smog-forming emissions such as NO_x. As an ongoing process, ARB reviews air contaminants and identifies those that are classified as TACs. ARB also continues to establish new programs and regulations for the control of TACs, including DPMs, as appropriate.

Local

San Joaquin Valley Air Pollution Control District

The SJVAPCD has local air quality jurisdiction in Stanislaus County. Primary responsibilities of the air district include overseeing stationary-source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by CEQA. SJVAPCD is also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws and for ensuring that NAAQS and CAAQS are met. The air district's 2015 *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI) provides lead agencies, consultants, and project applicants with uniform procedures for analyzing construction- and operational-related pollutant emissions from new development (San Joaquin Valley Air Pollution Control District 2015).³

Air Quality Management Plans

The SJVAPCD has adopted several attainment plans in an attempt to achieve state and federal air quality standards. The air district must continuously monitor its progress in implementing attainment plans and must periodically report to the ARB and the EPA. It must also periodically revise its attainment plans to reflect new conditions and requirements in accordance with schedules mandated by the CCAA and CAAA.

The 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone was adopted on October 8, 2004, submitted to EPA on November 15, 2004, and the Clarifications for the 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone was adopted on August 21, 2008. The EPA proposed approval and partial disapproval of the 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone on June 30, 2009. In September 2013, the SJVAPCD adopted the 2013 plan for the Revoked 1-hour Ozone standard. The EPA approval of the 2013 Ozone plan is forthcoming. The 2007 Ozone Plan for 8-hour ozone was adopted on April 30, 2007, and the Amendment to the 2007 Ozone Plan to Extend the Rule Adoption Schedule for Organic Waste Operations was adopted on December 18, 2008. A future 8-hour ozone plan is anticipated to be due for submittal to the EPA in 2015 or 2016.

The 2007 PM₁₀ Maintenance Plan and Request for Redesignation was approved by ARB on October 25, 2007, and there are no new PM₁₀ Plans under development. The 2013 PM_{2.5} Plan was adopted on December 20, 2013. This plan addresses EPA's 24-hour PM_{2.5} standard of 35 µg/m,³ which was established by EPA in 2006.

ARB last updated the CO Attainment Plan in 2004, and no future updates are planned unless violations of the NAAQS or CAAQS for CO occur.

Regulation VIII

The SJVAPCD considers PM₁₀ to be the primary pollutant of concern from construction activities. It also considers compliance with its Regulation VIII "Fugitive PM₁₀ Prohibitions," including implementation of all feasible control measures specified in its 2015 guide (San Joaquin Valley Air

³ The SJVAPCD issued an update to their GAMAQI in July 2014. However, this update is considered draft and has not been approved by the SJVAPCD's Governing Board. Consequently, the current GAMAQI, which was adopted on January 10, 2002, is utilized in this analysis.

Pollution Control District 2015), to be sufficient mitigation to minimize adverse air quality effects from construction and reduce PM10 emissions to less-than-significant levels. All construction projects must abide by Regulation VIII. Typical measures that might be included in a dust control plan based on Regulation VIII could include, but are not limited to:

- Pre-activity.
 - Pre-water the work site and phase work to reduce the amount of disturbed surface area at any one time.
- Active operations.
 - Apply water to dry areas during leveling, grading, trenching, and earthmoving activities.
 - Construct and maintain wind barriers and apply water or dust suppressants to the disturbed surface areas.
- Inactive operations, including after work hours, weekends, and holidays.
 - Apply water or dust suppressants on disturbed surface areas to form a visible crust, and restrict vehicle access to maintain the visible crust.
- Temporary stabilization of areas that remain unused for 7 or more days.
 - Restrict vehicular access and apply and maintain water or dust suppressants on all un-vegetated areas.
 - Establish vegetation on all previously disturbed areas.
 - Apply and maintain gravel at all previously disturbed areas.
 - Pave previously disturbed areas.
- Unpaved access and haul roads, traffic and equipment storage areas.
 - Apply water or dust suppressants to unpaved haul and access roads.
 - Post a speed limit of not more than 15 miles per hour, using signs at each entrance and again every 500 feet.
 - Apply water or dust suppressants to vehicle traffic and equipment storage areas.
- Wind events.
 - Water application equipment will be used to apply water to control fugitive dust during wind events, unless unsafe to do so.
 - Outdoor construction activities that disturb the soil will cease whenever visible dust emissions cannot be effectively controlled.
- Outdoor handling of bulk materials.
 - Water or dust suppressants will be applied when handling bulk materials.
 - Wind barriers with less than 50% porosity will be installed and maintained, and water or dust suppressants will be applied.

- Outdoor storage of bulk materials.
 - Water or dust suppressants will be applied to storage piles.
 - Storage piles will be covered with tarps, plastic, or other suitable material and anchored in a manner that prevents the cover from being removed by wind action.
 - Wind barriers with less than 50% porosity will be installed and maintained around the storage piles, and water or dust suppressants will be applied.
 - A three-sided structure with less than 50% porosity that is at least as high as the storage piles will be used.
- Onsite transporting of bulk materials.
 - Vehicle speed will be limited on the work site.
 - All haul trucks will be loaded such that the freeboard is not less than 6 inches when transported across any paved public access road.
 - A sufficient amount of water will be applied to the top of the load to limit visible dust emissions.
 - Haul trucks will be covered with a tarp or other suitable cover.
- Offsite transporting of bulk materials.
 - The following practices will be followed:
 - The interior of emptied truck cargo compartments will be cleaned or covered before leaving the site.
 - Spillage or loss of bulk materials from holes or other openings in the cargo compartment's floor, sides, and tailgates will be prevented.
- Outdoor transport using a chute or conveyor.
 - No open chutes or conveyors will be used.
 - Chutes or conveyors will be fully enclosed.
 - Water spray equipment will be used to sufficiently wet the materials.
 - Transported materials will be washed or screened to remove fines (PM10 or smaller)

Indirect Source Review

Rule 9510, *Indirect Source Review*, fulfills the SJVAPCD's emission reduction commitments in the PM10 and Ozone Attainment Plans through emission reductions from required design features and onsite measures for the construction and use of development projects. Rule 9510 does not apply to the General Plan Update and ALUCP. The following discussion explains how it reduces emissions from individual development projects.

Rule 9510 requires emission reductions associated with construction and operational activities for projects subject to the rule. For construction emissions, Rule 9510 requires a 20% reduction of total NO_x emissions and a 45% reduction of the total PM10 exhaust emissions. For operational emissions, Rule 9510 requires 33.3% of the project's operational baseline NO_x and 50% of the project's operational baseline PM10 emissions be reduced over a period of 10 years. Transportation or transit projects exceeding 2.0 tons of construction-related NO_x or PM10 emissions are required to

reduce NO_x emissions by 20% and PM₁₀ exhaust emissions by 45%, compared to the statewide fleet average. Operational emissions associated with transportation and transit projects are not subject to Rule 9510. If the required emissions reductions are not achieved through traditional means, projects may purchase offsets on a per ton basis from the SJVAPCD through Rule 9510's offsite emission reduction fee program to comply with the requirements of Rule 9510. Rule 9510 applies to any applicant that seeks to gain a final discretionary approval for a development project, or any portion thereof, which upon full buildout will include any one of the following:

- 50 residential units
- 2,000 square feet of commercial space
- 25,000 square feet of light industrial space
- 100,000 square feet of heavy industrial space
- 20,000 square feet of medical office space
- 39,000 square feet of general office space
- 9,000 square feet of educational space
- 10,000 square feet of government space
- 20,000 square feet of recreational space
- 9,000 square feet of space not identified above.

Compliance with Rule 9510 is separate from the CEQA process, although the control measures used to comply with Rule 9510 may be used to mitigate CEQA impacts.

Voluntary Emissions Reduction Agreement

The GAMAQI describes the SJVAPCD's Voluntary Emissions Reduction Agreement or VERA approach to mitigating air quality impacts when project design elements, mitigation measures, and compliance with SJVAPCD regulations are not enough to reduce impacts to a less than significant level. As explained there: "[a] VERA is a mitigation measure by which the project proponent provides pound-for-pound mitigation for air emissions through a process that funds and implements emissions reduction projects." A VERA is a contractual agreement with the SJVAPCD through which the project proponent commits to mitigating project-specific emissions by providing funds to the SJVAPCD that will be used for specific emissions reduction projects.

Review Under CEQA

Stanislaus County routinely consults with the SJVAPCD during the CEQA reviews of development projects. The SJVAPCD comments on the given project's potential to adversely affect air quality and recommends compliance with SJVAPCD rules/regulations and other means of reducing impacts. The County incorporates the SJVAPCD's recommended best practices into the conditions of approval required of the project. These include use of construction-related equipment powered by engines compliant with Tier II emissions standards, at minimum, and limitations on hours of activity (San Joaquin Valley Air Pollution Control District 2015).

Stanislaus County

General Plan Conservation/Open Space Element

The existing Conservation/Open Space Element includes the following goal and policies related to air quality. Each of these policies also includes implementation measures.

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.

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

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

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

Existing Conditions

Climate and Atmospheric Conditions

Stanislaus County is located in the northern part of the SJVAB. The SJVAB, which is approximately 250 miles long and averages 35 miles wide, is the second largest air basin in the state. The SJVAB is defined by the Sierra Nevada mountains in the east (8,000 to 14,000 feet in elevation), the Coast Ranges in the west (averaging 3,000 feet in elevation), and the Tehachapi mountains in the south (6,000 to 8,000 feet in elevation). The valley is basically flat with a slight downward gradient to the northwest. The valley opens to the sea at the Carquinez Straits where the San Joaquin–Sacramento Delta empties into San Francisco Bay. The San Joaquin Valley (SJV) thus could be considered a “bowl” open only to the north.

The SJVAB has an inland Mediterranean climate averaging over 260 sunny days per year. The valley floor experiences warm, dry summers and cool, wet winters. Summer high temperatures often exceed 100° F, averaging in the low 90s in the northern valley and high 90s in the south. In the entire SJVAB, high daily temperature readings in summer average 95° F. Over the last 30 years, the SJVAB averaged 106 days per year 90° F or hotter, and 40 days per year 100° F or hotter. The daily summer temperature variation can be as much as 30° F.

In winter, as the cyclonic storm track moves southward, the storm systems moving in from the Pacific Ocean bring a maritime influence to the SJVAB. The high mountains to the east prevent the cold, continental air masses of the interior from influencing the valley. Winters are mild and humid. Temperatures below freezing are unusual. Average high temperatures in the winter are in the 50s, but highs in the 30s and 40s can occur on days with persistent fog and low cloudiness. The average daily low temperature is 45° F.

Although marine air generally flows into the basin from the San Joaquin River Delta, the region’s topographic features restrict air movement through and out of the basin. The Coastal Range hinders wind access into the SJVAB from the west, the Tehachapi Mountains prevent southerly passage of air flow, and the high Sierra Nevada range is a significant barrier to the east. These topographic features result in weak air flow which becomes blocked vertically by high barometric pressure over the

SJVAB. As a result, the SJVAB is highly susceptible to pollutant accumulation over time. Most of the surrounding mountains are above the normal height of summer inversion layers (1,500–3,000 feet).

The existing air quality conditions in Stanislaus County can be characterized by monitoring data collected in the region. Table 3.3-2 summarizes data for criteria air pollutant levels from monitoring stations in the county for the last 3 years for which complete data are available (2011–2013). Air quality concentrations are expressed in terms of parts per million (ppm) or micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). As shown in Table 3.3-2, the monitoring stations have experienced violations of the NAAQS and CAAQS for all pollutants except CO and NO_2 .

Table 3.3-2. Recent Criteria Air Pollutant Levels for Stanislaus County

Pollutant Standards	2011	2012	2013
Ozone (O_3)			
Maximum 1-hour concentration (ppm)			
Modesto-14 th Street	0.091	0.104	0.088
Turlock-South Minaret Street	0.111	0.115	0.095
Maximum 8-hour concentration (ppm)			
Modesto-14 th Street	0.078	0.091	0.082
Turlock-South Minaret Street	0.094	0.107	0.085
Number of days standard exceeded ^b			
CAAQS 1-hour (>0.09 ppm)			
Modesto-14 th Street	0	2	0
Turlock-South Minaret Street	4	17	1
CAAQS 8-hour (>0.070 ppm)			
Modesto-14 th Street	7	12	13
Turlock-South Minaret Street	34	56	24
NAAQS 8-hour (>0.075 ppm)			
Modesto-14 th Street	3	6	2
Turlock-South Minaret Street	17	35	14
Particulate Matter (PM₁₀)^c			
National ^d maximum 24-hour concentration ($\mu\text{g}/\text{m}^3$)			
Modesto-14 th Street	69.4	74.1	73.0
Turlock-South Minaret Street	69.0	102.8	79.2
National ^d second-highest 24-hour concentration ($\mu\text{g}/\text{m}^3$)			
Modesto-14 th Street	63.1	59.9	67.2
Turlock-South Minaret Street	67.7	77.0	77.8
State ^e maximum 24-hour concentration ($\mu\text{g}/\text{m}^3$)			
Modesto-14 th Street	73.5	74.6	77.5
Turlock-South Minaret Street	73.3	103.8	82.9
State ^e second-highest 24-hour concentration ($\mu\text{g}/\text{m}^3$)			
Modesto-14 th Street	68.6	63.5	70.0
Turlock-South Minaret Street	72.1	76.8	81.3

Pollutant Standards	2011	2012	2013
National annual average concentration ($\mu\text{g}/\text{m}^3$)			
Modesto-14 th Street	25.5	25.1	30.4
Turlock-South Minaret Street	27.4	30.4	35.0
State annual average concentration ($\mu\text{g}/\text{m}^3$) ^f			
Modesto-14 th Street	*	25.6	30.9
Turlock-South Minaret Street	*	31.0	35.9
Number of days standard exceeded ^b			
NAAQS 24-hour ($>150 \mu\text{g}/\text{m}^3$) ^f			
Modesto-14 th Street	0	0	0
Turlock-South Minaret Street	0	0	0
CAAQS 24-hour ($>50 \mu\text{g}/\text{m}^3$) ^f			
Modesto-14 th Street	*	30.9	57.7
Turlock-South Minaret Street	*	54.8	73.7
Particulate Matter (PM_{2.5})^c			
National ^d maximum 24-hour concentration ($\mu\text{g}/\text{m}^3$)			
Modesto-14 th Street	71.7	62.3	83.2
Turlock-South Minaret Street	77.9	58.4	74.9
National ^d second-highest 24-hour concentration ($\mu\text{g}/\text{m}^3$)			
Modesto-14 th Street	70.2	57.2	73.5
Turlock-South Minaret Street	74.8	57.7	70.8
State ^e maximum 24-hour concentration ($\mu\text{g}/\text{m}^3$)			
Modesto-14 th Street	71.7	62.3	83.2
Turlock-South Minaret Street	77.9	58.4	74.9
State ^e second-highest 24-hour concentration ($\mu\text{g}/\text{m}^3$)			
Modesto-14 th Street	70.2	57.2	73.5
Turlock-South Minaret Street	74.8	57.7	70.8
National annual average concentration ($\mu\text{g}/\text{m}^3$)			
Modesto-14 th Street	14.6	11.9	14.3
Turlock-South Minaret Street	17.1	14.8	15.1
State annual average concentration ($\mu\text{g}/\text{m}^3$) ^f			
Modesto-14 th Street	14.7	11.9	14.4
Turlock-South Minaret Street	17.1	14.8	15.2
Number of days standard exceeded ^b			
NAAQS 24-hour ($>150 \mu\text{g}/\text{m}^3$) ^f			
Modesto-14 th Street	25.0	13.0	37.6
Turlock-South Minaret Street	36.3	25.0	40.3
CAAQS 24-hour ($>50 \mu\text{g}/\text{m}^3$) ^f			
Modesto-14 th Street	-	-	-
Turlock-South Minaret Street	-	-	-

Pollutant Standards	2011	2012	2013
Carbon Monoxide (CO)			
Maximum 1-hour concentration (ppm)			
Modesto-14 th Street	2.9	2.6	2.6
Turlock-South Minaret Street	2.0	1.8	1.9
Maximum 8-hour concentration (ppm)			
Modesto-14 th Street	2.71	2.10	2.1
Turlock-South Minaret Street	1.44	1.29	1.6
Number of days standard exceeded ^b			
NAAQS 8-hour (>9 ppm)			
Modesto-14 th Street	0	0	0
Turlock-South Minaret Street	0	0	0
CAAQS 8-hour (>9 ppm)			
Modesto-14 th Street	0	0	0
Turlock-South Minaret Street	0	0	0

Sources: California Air Resources Board 2015; U.S. Environmental Protection Agency 2015.

ppm = parts per million.

NAAQS = National Ambient Air Quality Standards.

CAAQS = California Ambient Air Quality Standards.

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.

mg/m^3 = milligrams per cubic meter.

– = data not available.

* = insufficient data.

^a An exceedance of a standard is not necessarily a violation, as each pollutant has specific criteria on which a violation of the state and federal standards would occur.

^b National statistics are based on standard conditions data. In addition, national statistics are based on samplers using federal reference or equivalent methods.

^c State statistics are based on local conditions data, except in the South Coast Air Basin, for which statistics are based on standard conditions data. In addition, state statistics are based on California approved samplers.

^d Measurements usually are collected every 6 days.

^e State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

^f Mathematical estimate of how many days concentrations would have been measured as higher than the level of the standard had each day been monitored. Values have been rounded.

Attainment Status

Local monitoring data (see Table 3.3-2) are used to designate areas as nonattainment, maintenance, attainment, or unclassified for the NAAQS and CAAQS. The four designations are further defined as follows:

- Nonattainment—assigned to areas where monitored pollutant concentrations consistently violate the standard in question.
- Maintenance—assigned to areas where monitored pollutant concentrations exceeded the standard in question in the past, but are no longer in violation of that standard.

- Attainment—assigned to areas where pollutant concentrations meet the standard in question over a designated period of time.
- Unclassified—assigned to areas where data are insufficient to determine whether a pollutant is violating the standard in question.

Federal Attainment Status

EPA has classified Stanislaus County as an extreme nonattainment area for the 8-hour ozone standard. For the CO standard, EPA has classified Stanislaus County as an unclassified/attainment area, except for the Modesto Urbanized Area, which is designated as a moderate maintenance area. For the PM10 standard, EPA has classified the County as a serious maintenance area. For PM2.5 standard, EPA has classified the County as a moderate nonattainment area.

State Attainment Status

The ARB has classified the County as a nonattainment area for the 8-hour ozone, PM10, and PM2.5 standards.

Stanislaus County's attainment status for each of these pollutants relative to the NAAQS and CAAQS is summarized in Table 3.3-3.

Table 3.3-3. Federal and State Attainment Status for Stanislaus County

Pollutant	Federal Standards	State Standards
Ozone – eight hour	Extreme Nonattainment	Nonattainment
PM10	Serious Maintenance	Nonattainment
PM2.5	Moderate Nonattainment	Nonattainment
CO	Attainment/Unclassified ^a	Attainment
NO ₂	Attainment/Unclassified	Attainment
SO ₂	Attainment/Unclassified	Attainment
Lead	Attainment/Unclassified	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

Sources: California Air Resources Board 2014; U.S. Environmental Protection Agency 2014.

^a The Modesto Urbanized Area is designated as a moderate maintenance area, while the rest of Stanislaus County is designated as an unclassified/attainment area

Existing Air Quality Inventory

Stanislaus County is home to many industries, processes, and actions that generate emissions of criteria pollutants. ARB compiles an emissions inventory for all sources of emissions within the County. This inventory is used by the SJVAPCD and ARB for regional air quality planning purposes and is the basis for the region's air quality plans. It includes stationary sources (e.g., landfills, food processing, mineral processes); area-wide sources (e.g., farming operations, construction/demolition activities, residential fuel combustion); and mobile sources (e.g., automobiles, aircraft, off-road equipment). Stanislaus County's inventory of emissions for the most recently available year (2012) is summarized in Table 3.3-4.

Table 3.3-4. Stanislaus County Existing (2012) Emissions Inventory

Source Type	Subcategory	Annual Emissions (tons per day)							
		TOG ^a	ROG	CO	NO _x	SO _x	PM	PM10	PM2.5
Stationary Sources									
Fuel Combustion	Electric Utilities	0.36	0.03	0.04	0.13	0.02	0.13	0.13	0.13
	Cogeneration	0	0	0	0	0	0	0	0
	Manufacturing and Industrial	0.04	0.02	0.42	0.59	0	0.01	0.01	0.01
	Food and Agricultural Processing	0.15	0.08	0.62	0.83	0.02	0.08	0.08	0.08
	Service and Commercial	0.12	0.05	0.44	1.29	0.09	0.13	0.12	0.12
	Other (Fuel Combustion)	0.02	0.02	0.05	0.17	0	0.01	0.01	0.01
Total Fuel Combustion		0.69	0.20	1.67	3.01	0.13	0.36	0.35	0.35
Waste Disposal	Sewage Treatment	0.02	0.02	0.04	0.01	0.02	0	0	0
	Landfills	10.98	0.07	0.03	0.01	0.01	0.09	0.02	0.01
	Incinerators	0.01	0	0.04	0	0	0.01	0	0
	Soil Remediation	0	0	0	0	0	0	0	0
	Other (Waste Disposal)	39.92	3.19	0	0	0	0.02	0.01	0
Total Waste Disposal		50.93	3.28	0.11	0.02	0.03	0.12	0.03	0.01
Cleaning and Surface Coatings	Laundering	0.1	0	0	0	0	0	0	0
	Degreasing	0.44	0.23	0	0	0	0	0	0
	Coatings and Related Process Solvents	1.83	1.79	0	0	0	0.05	0.05	0.05
	Printing	0.72	0.72	0	0	0	0	0	0
	Adhesives and Sealants	0.07	0.06	0	0	0	0	0	0
	Other (Cleaning and Surface Coatings)	0.18	0.12	0	0	0	0	0	0
Total Cleaning and Surface Coatings		3.34	2.92	0	0	0	0.05	0.05	0.05
Petroleum Production and Marketing	Oil and Gas Production	0	0	0	0	0	0	0	0
	Petroleum Refining	0	0	0	0	0	0	0	0
	Petroleum Marketing	8.64	0.85	0	0	0	0	0	0
	Other (Petroleum Production and Marketing)	0	0	0	0	0	0	0	0
Total Petroleum Production and Marketing		8.64	0.85	0	0	0	0	0	0
Industrial Processes	Chemical	0.44	0.44	0	0	0	0.02	0.02	0.01
	Food and Agriculture	0.84	0.72	0	0	0.03	1.04	0.43	0.13
	Mineral Processes	0.02	0.01	0	0	0	0.81	0.51	0.25
	Metal Processes	0.21	0.15	0	0	0	0	0	0
	Wood and Paper	2.24	2.24	0	0	0	0.07	0.04	0.03
	Glass and Related Products	0.01	0.01	0	0.53	0.78	0.14	0.14	0.13
	Other (Industrial Processes)	0.01	0.01	0	0	0.09	0.07	0.05	0.03
	Total Industrial Processes		3.77	3.58	0	0.53	0.90	2.15	1.19

Source Type	Subcategory	Annual Emissions (tons per day)							
		TOG ^a	ROG	CO	NO _x	SO _x	PM	PM10	PM2.5
Area Wide Sources									
Solvent Evaporation	Consumer Products	3.49	2.85	0	0	0	0	0	0
	Architectural Coatings and Related Process Solvents	1.38	1.28	0	0	0	0	0	0
	Pesticides/Fertilizers	1.57	1.55	0	0	0	0	0	0
	Asphalt Paving /Roofing	0.11	0.1	0	0	0	0	0	0
Total Solvent Evaporation		6.55	5.78	0	0	0	0	0	0
Miscellaneous Processes	Residential Fuel Combustion	1.87	0.82	5.05	0.92	0.04	0.8	0.75	0.72
	Farming Operations	122.9	15.54	0	0	0	28.68	13.11	1.92
	Construction and Demolition	0	0	0	0	0	3.12	1.53	0.15
	Paved Road Dust	0	0	0	0	0	10.3	4.71	0.71
	Unpaved Road Dust	0	0	0	0	0	4.22	3	0.25
	Fugitive Windblown Dust	0	0	0	0	0	6.33	2.88	0.5
	Fires	0.02	0.01	0.18	0	0	0.02	0.02	0.02
	Managed Burning and Disposal	0.49	0.28	3.04	0.27	0.01	0.36	0.36	0.34
	Cooking	0.12	0.08	0	0	0	0.52	0.52	0.51
	Other (Miscellaneous Processes)	0	0	0	0	0	0	0	0
Total Miscellaneous Processes		125.4	16.73	8.27	1.19	0.05	54.35	26.88	5.12

Source Type	Subcategory	Annual Emissions (tons per day)							
		TOG ^a	ROG	CO	NO _x	SO _x	PM	PM10	PM2.5
Mobile Sources									
On-Road Motor Vehicles	Light Duty Passenger (LDA)	1.96	1.81	15.06	1.31	0.02	0.28	0.28	0.12
	Light Duty Trucks – 1 (LDT1)	0.72	0.68	5.2	0.45	0	0.04	0.04	0.02
	Light Duty Trucks – 2 (LDT2)	0.93	0.86	7.62	0.9	0.01	0.1	0.1	0.04
	Medium Duty Trucks (MDV)	1.24	1.11	12.02	1.61	0.02	0.13	0.12	0.05
	Light Heavy Duty Gas Trucks – 1 (LHDV1)	0.46	0.44	3.33	0.57	0	0.02	0.02	0.01
	Light Heavy Duty Gas Trucks – 2 (LHDV2)	0.04	0.03	0.27	0.04	0	0	0	0
	Medium Heavy Duty Gas Trucks (MHDV)	0.12	0.12	1.04	0.09	0	0	0	0
	Heavy Heavy Duty Gas Trucks (HHDV)	0.02	0.02	0.37	0.04	0	0	0	0
	Light Heavy Duty Diesel Trucks – 1 (LHDV1)	0.1	0.09	0.43	1.84	0	0.05	0.05	0.03
	Light Heavy Duty Diesel Trucks – 2 (LHDV2)	0.02	0.02	0.09	0.38	0	0.01	0.01	0.01
	Medium Heavy Duty Diesel Trucks (MHDV)	0.1	0.09	0.28	1.56	0	0.08	0.08	0.06
	Heavy Heavy Duty Diesel Trucks (HHDV)	0.54	0.47	2.1	7.98	0.01	0.36	0.36	0.29
	Motorcycles (MCY)	0.48	0.45	3.72	0.12	0	0	0	0
	Heavy Duty Diesel Urban Buses (UB)	0.01	0.01	0.04	0.23	0	0.01	0.01	0.01
	Heavy Duty Gas Urban Buses (UB)	0.01	0.01	0.12	0.02	0	0	0	0
	School Buses – Gas (SBG)	0.01	0.01	0.13	0.02	0	0	0	0
	School Buses – Diesel (SBD)	0	0	0.01	0.07	0	0.01	0.01	0
	Other Buses – Gas (OBG)	0.02	0.02	0.27	0.05	0	0	0	0
	Other Buses – Motor Coach – Diesel (OBC)	0	0	0.02	0.09	0	0	0	0
	All Other Buses – Diesel (OBD)	0	0	0.01	0.07	0	0	0	0
Motor Homes (MH)	0.02	0.02	0.41	0.11	0	0	0	0	
Total On-Road Motor Vehicles		6.71	6.26	52.54	17.55	0.06	1.09	1.08	0.64
Other Mobile Sources	Aircraft	0.27	0.26	3.46	0.09	0.02	0.01	0.01	0.01
	Trains	0.13	0.11	0.4	1.69	0	0.04	0.04	0.04
	Recreational Boats	0.52	0.45	1.37	0.08	0	0.03	0.03	0.02
	Off-Road Recreational Vehicles	0.27	0.27	0.09	0	0	0	0	0
	Off-Road Equipment	1.42	1.29	13.83	2.22	0	0.15	0.15	0.14
	Farm Equipment	1.01	0.87	5.34	4.49	0.01	0.27	0.26	0.25
	Fuel Storage and Handling	0.26	0.25	0	0	0	0	0	0
	Total Other Mobile Sources		3.88	3.50	24.49	8.57	0.03	0.50	0.49

Source: California Air Resources Board 2013b.

^a TOG (total organic compounds) includes all organic gas compounds emitted to the atmosphere, including the low reactivity or “exempt VOC” compounds (e.g., methane, ethane, various chlorinated fluorocarbons, acetone, perchloroethylene, volatile methyl siloxanes, etc.). It does not include CO, CO₂, carbonic acid, metallic carbides or carbonates, or ammonium carbonate.

Sensitive Receptors

The SJVAPCD generally defines a sensitive receptor as people that may experience adverse effects from unhealthful concentrations of air pollutants or the, or facilities that generally house such people (schools, hospitals, clinics, elderly housing, residences, etc.). Sensitive receptors that could be affected by air pollutant emissions are located throughout the county and are concentrated in urbanized and populated areas.

3.3.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan updates; discusses the individual impacts relative to the thresholds of significance; discusses mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and indicates the overall significance of the impact with mitigation incorporated.

Major Sources Used in Analysis

The major sources used in this analysis are listed below.

- San Joaquin Valley Air Pollution Control District
- Fehr & Peers traffic data generated in preparation of the traffic section of the DEIR
- ARB EMFAC2014 Emissions Model
- Caltrans CT-EMFAC Emissions Model

Approach and Methodology

As implementation of the General Plan and Airport Land Use Compatibility Plan Updates would not include any development projects, the impacts on air quality are examined at a general level in this analysis. Note that although the air quality analysis relies on traffic data, an increase in traffic congestion does not necessarily result in a significant impact on air quality. Forecasted increases in overall vehicle miles travelled and traffic volumes on key roads were used to model potential mobile source and CO hotspot impacts, respectively.

Mobile Sources

Long-term air quality impacts from motor vehicles operating within the plan area were evaluated using vehicle miles traveled (VMT) traffic data provided by the project traffic engineers, Fehr & Peers, and Caltrans' CT-EMFAC (version 5.0) emissions model.

Daily VMT data for AM Peak, Midday Peak, PM Peak, and Off Peak periods was provided in 5 mile-per-hour (mph) speed bins (or ranges) for unincorporated and incorporated Stanislaus County, with and without the effects of the *Final 2014 Regional Transportation Plan/Sustainable Communities Strategies* (2014 RTP/SCS), which are the conformity and SB 375 conditions, respectively. The traffic data used in the emissions modeling analysis are presented in Appendix C-1.

Criteria pollutants were calculated by multiplying the AM Peak, Midday Peak, PM Peak, and Off Peak period VMT estimates by the appropriate exhaust emission factors provided by CT-EMFAC. Total emissions during the AM Peak, Midday Peak, PM Peak, and Off Peak periods were then summed to

obtain a total daily emissions estimate. The resulting calculated daily emissions were then annualized using a factor of 347. Please refer to Appendix C-2 for the CT-EMFAC emission factors.

CO Hot-Spots

The effects of localized CO hotspots were evaluated through CO dispersion modeling consistent with the Transportation Project-Level Carbon Monoxide Protocol, which was developed for Caltrans by the Institute of Transportation Studies at the University of California, Davis. The CO protocol details a qualitative step-by-step procedure to determine whether project-related CO concentrations have a potential to generate new air quality violations, worsen existing violations, or delay the attainment of NAAQS or CAAQS for CO. CO concentrations at potential sensitive receptors adjacent to the most congested and heavily traveled roadway segments were estimated through dispersion modeling using the CALINE4 dispersion model and emission factors from the ARB's EMFAC2014 emissions model.

Roadway and Traffic Conditions

CO hotspots were evaluated at roadway segments within the study area for existing (2014) and design year (2035) conditions. Modeled traffic volumes and operating conditions were obtained from daily segment volume traffic data prepared by the project traffic engineers, Fehr & Peers, with the peak hour volumes estimated as representing 10% of the daily volumes based on industry standard assumptions.

CO modeling was conducted at the following four roadway volumes, which were identified in the traffic study as having the highest daily volumes and/or lowest level of service (LOS).

- SR 99: Hammett Road to SR 219
- SR 99: Beckwith Road to Carpenter Road
- SR 99: Carpenter Road to 9th Street
- SR 99: Woodland Ave to 9th Street

CALINE4 roadway geometry for each modeled segment was based on satellite confirmation of the number of lanes at each segment, and modeled segments were assumed at 1,000 meters (3,281 feet). A 12-foot lane width was assumed) plus an additional mixing zone on either side (generally 10 feet on each side).

Vehicle Emission Rates

Vehicle emission rates were determined using the ARB's EMFAC2014 emission rate program. Free-flow traffic speeds were adjusted to 5.0 miles per hour to represent a worst-case scenario. EMFAC2014 estimates emission rates from approximately 40 vehicle classes. A composite emission factor for a typical Stanislaus County vehicle fleet was calculated by weighting vehicle emissions by the relative number of VMT expected for each vehicle class based on EMFAC2014 default values for Stanislaus County.

Receptor Locations

CO concentrations were estimated at five receptor locations at each of the four modeled segments, for a total of 20 receptors. CALINE4 guidance specifies that the model should not be used to estimate pollutant concentrations within 3 meters (9.8 feet) of the traveled way; this assumption could result

in an artificially high CO concentration, since it is unlikely a person will be located 3 meters from a roadway for 1 to 8 hours. However, to ensure the most conservative analysis, the receptors were placed at the midpoint of each segment 3 meters away from the traveled way of each modeled segment, with additional receptors located 15-, 25-, 50-, and 100-feet from the traveled way of each modeled segment. A standard receptor elevation of 1.8 meters (5.9 feet) was used consistent with CO protocol guidance.

Meteorological Conditions

Meteorological inputs to the CALINE4 model were determined consistent with Caltrans' 1998 Air Quality Technical Analysis Notes. The meteorological conditions used in the modeling represent a calm winter period. Worst-case wind angles were modeled to estimate conservative CO concentrations at each receptor. The meteorological inputs include wind speed of 0.5 meters per second, ground-level temperature inversion (atmospheric stability class G), wind direction standard deviation equal to 5 degrees, ambient temperature of 32°F, and a mixing height of 1,000 meters (3,281 feet).

Background Concentrations and 8-Hour Values.

To account for sources of CO not included in the modeling, a background concentration of 2.3 ppm was added to the modeled cumulative 1-hour values, while a background concentration of 1.9 ppm was added to the modeled cumulative 8-hour values. Background concentration data for 1- and 8-hour values were obtained from the EPA's Air Data webpage (U.S. Environmental Protection Agency 2014). Maximum 1- and 8-hour values for the years 2011–2013 were averaged to obtain a background concentration. Eight-hour modeled values were calculated from the 1-hour values using a persistence factor of 0.7. Background concentrations for future 2035 years were assumed to be the same as those for the current year. Actual 1- and 8-hour background concentrations in future years would likely be lower than those used in the CO modeling analysis because the trend in CO emissions and concentrations is decreasing due to continuing improvements in engine technology and the retirement of older, higher-emitting vehicles. To ensure a conservative analysis, it was assumed that the hourly traffic during an 8-hour sampling period was equal to the 1-hour commuting peak flowrate.

Thresholds of Significance

Based on State CEQA Guidelines Appendix G, the plan updates would have a significant impact with respect to air quality they would result in any of the following.

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

For purposes of this EIR, the County is addressing the first four impacts identified in Appendix G as follows. These impact categories consider the same concerns as Appendix G, but are organized in a manner more in keeping with SJVAPCD thresholds and regulations.

- Impact AQ-1: Generate construction-related emissions in excess of SJVAPCD thresholds
- Impact AQ-2: Generate on-road mobile source criteria pollutant emissions in excess of SJVAPCD thresholds
- Impact AQ-3: Expose sensitive receptors to substantial concentrations of carbon monoxide

According to the State CEQA Guidelines, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make significance determinations for potential impacts on environmental resources. As discussed above, the SJVAPCD is responsible for ensuring that state and federal ambient air quality standards are not violated within the SJVAB. Analysis requirements for construction- and operational-related pollutant emissions are contained in the SJVAPCD's (2015) GAMAQI. A review of the GAMAQI indicates that the district considers PM10 to be the primary pollutant of concern from construction activities and that compliance with SJVAPCD Regulation VIII will constitute sufficient mitigation to reduce PM10 emissions to less-than-significant levels. The amount of PM10 emitted during construction activities varies greatly depending on the level of activity, the specific operations taking place, the equipment being operated, soil characteristics, and weather conditions.

Despite this variability in emissions, experience has shown that several feasible control measures can be reasonably implemented during construction activities to reduce PM10 emissions during construction. The SJVAPCD has determined that compliance with its Regulation VIII, "Fugitive PM10 Prohibitions," including implementation of all feasible control measures specified in its 2015 guide (San Joaquin Valley Air Pollution Control District 2015), is sufficient mitigation to minimize adverse air quality effects from construction.

Since the publication of the district's guidance manual, the SJVAPCD has revised some of the rules comprising Regulation VIII. Guidance from the SJVAPCD staff indicates that implementation of a dust control plan would satisfy all of the requirements of SJVAPCD Regulation VIII (Siong pers. comm. September 2011). Further consultation with the SJVAPCD staff indicates that although no explicit thresholds for construction-related emissions of ozone precursors are found in the GAMAQI, the SJVAPCD considers a significant impact to occur when construction emissions of ROG or NO_x exceed 10 tons per year or PM10 or PM2.5 exceed 15 tons per year (Siong pers. comm. September 2011).

The SJVAPCD's thresholds of significance, as indicated in their guidance documents (San Joaquin Valley Air Pollution Control District 2015) and through consultation with SJVAPCD staff, are summarized below.

- The Plan would expose sensitive receptors to substantial pollutant concentrations.
- Plan operations or construction would generate more than 10 tons/year of ROG or NO_x.
- Plan operations or construction would generate more than 15 tons/year of PM10 or PM2.5.
- Plan-related emissions of CO would exceed NAAQS or CAAQS.
- The Plan would not comply with the SJVAPCD's Regulation VIII regarding particulate matter emissions from construction activities. Compliance with SJVAPCD Regulation VIII and the local zoning code will reduce particulate emission impacts to levels that are considered less than significant by the SJVAPCD.

- The Plan would result in more than 10 cases of cancer in 1 million.

Impacts and Mitigation Measures

Impact AQ-1: Generate construction-related emissions in excess of SJVAPCD thresholds (significant and unavoidable)

Construction associated with the general plan would result in the temporary generation of ozone precursor (ROG, NO_x), CO, and particulate matter exhaust emissions that would result in short-term impacts on ambient air quality in the county. Emissions would originate from mobile and stationary construction equipment exhaust, employee vehicle exhaust, dust from clearing the land, exposed soil eroded by wind, and ROG from architectural coatings and asphalt paving. Construction-related emissions would vary substantially depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content.

As indicated in Chapter 2, *Project Description*, the General Plan Update would include changes to the text of the land use designations of the general plan, but does not propose any changes to the land use map or the existing boundaries of the land use designations. Consequently, it not anticipated that plan implementation would directly result in construction activities or emissions. It is currently unknown what level of construction activities would occur with implementation of the plan. Consequently, emissions from construction activities associated with buildout of the project cannot be quantified and are evaluated qualitatively for purposes of this analysis. However, should construction activities exceed the SJVAPCD's thresholds for ROG and NO_x of 10 tons per year or PM10 or PM2.5 of 15 tons per year, a significant construction-related impact would occur.

As previously indicated, all construction projects must abide by Regulation VIII. Since the publication of the district's guidance manual, the SJVAPCD has revised some of the rules comprising Regulation VIII. Guidance from the SJVAPCD staff indicates that implementation of a dust control plan would satisfy all of the requirements of SJVAPCD Regulation VIII. Compliance with Regulation VIII would reduce construction-related fugitive dust emissions from future development activity.

With respect to construction-related exhaust emissions of ROG, NO_x, PM10, and PM2.5, Rule 9510 would help to reduce construction exhaust emissions and further reduce construction impacts. In addition, the County incorporates best practices as identified by the SJVAPCD into project conditions of approval. However, given the lack of specifics regarding construction projects at this time, it is uncertain whether construction activities would result in ROG, NO_x, PM10, and PM2.5 emissions in excess of SJVAPCD thresholds, and the impact is therefore considered to be significant.

Significance: Significant and Unavoidable (no mitigation available)

Impact AQ-2: Generate on-road mobile source criteria pollutant emissions in excess of SJVAPCD thresholds (less than significant)

As indicated in Chapter 2, *Project Description*, the General Plan Update would include changes to the text of the land use designations of the general plan, but does not propose any changes to the land use map or the existing boundaries of the land use designations. Consequently, no changes to land use or the roadway network would occur that would result in changes in operational emissions

(either area source or mobile source⁴) related to the proposed General Plan. In general, emissions of criteria pollutant are expected to decrease between existing and future conditions due mainly to emission factors decreasing with time, as well as how VMT changes with various speeds.

While no changes in operational emissions would occur as a direct result of the General Plan Update, buildout of the general plan would result in operational mobile source emissions due to increases in VMT. Emissions were evaluated using daily VMT traffic data provided by the project traffic engineers, Fehr & Peers, and Caltrans' CT-EMFAC (version 5.0) emissions model. Table 3.3-5 presents a summary of emissions by analysis year for each study scenario evaluated, while Table 3.3-6 presents the same data summarized by with and without 2014 RTP/SCS conditions (conformity and SB 375 conditions, respectively).

Table 3.3-5. Summary of Emissions by Analysis Year and Study Scenario

Study Scenario	VMT	ROG	NO _x	CO	PM10	PM2.5
2014 Conditions						
2014 Combined – Conformity	3,593,175,801	831.2	8,304.0	3,704.6	268.6	139.2
2014 Combined – SB 375	1,932,814,771	438.7	4,368.4	1,974.3	142.1	72.7
2014 Unincorporated – Conformity	2,094,556,247	487.8	4,884.2	2,164.5	157.6	82.0
2014 Unincorporated – SB 375	442,310,504	99.4	988.6	448.6	32.3	16.5
2014 Incorporated – Conformity	3,380,471,790	783.0	7,824.9	3,487.7	252.9	131.2
2014 Incorporated – SB 375	1,490,504,353	339.3	3,379.7	1,525.7	109.8	56.3
2035 Conditions						
2035 Combined – Conformity	5,058,910,967	538.7	4,587.3	1,282.0	42.2	38.9
2035 Combined – SB 375	2,715,426,962	223.2	1,912.1	553.2	16.7	15.4
2035 Unincorporated – Conformity	3,377,402,790	359.0	3,057.1	851.6	28.4	26.2
2035 Unincorporated – SB 375	923,102,308	94.1	813.3	232.0	6.9	6.4
2035 Incorporated – Conformity	4,499,699,057	479.6	4,086.3	1,139.0	37.8	34.9
2035 Incorporated – SB 375	1,792,324,789	186.4	1,606.1	453.9	14.1	13.0
2035 NP Combined – Conformity	4,930,462,671	527.2	4,489.0	1,250.3	41.4	38.2
2035 NP Combined – SB 375	2,596,718,470	268.8	2,316.3	655.9	20.2	18.6
2035 NP Unincorporated – Conformity	3,271,124,265	349.7	2,977.5	825.3	27.7	25.6
2035 NP Unincorporated – SB 375	853,305,294	87.3	753.1	214.5	6.4	5.9
NP = No Project.						

⁴ Area sources include emissions from natural gas combustion, wood burning, landscaping activities, consumer products (e.g., personal care products), and periodic paint emissions from facility upkeep. Mobile sources are sources of emissions associated with vehicle trips.

Table 3.3-6. Summary of Emissions by Conformity and SB 375 Conditions

Study Scenario	VMT	ROG	NO _x	CO	PM10	PM2.5
Conformity Conditions						
2014 Combined – Conformity	3,593,175,801	831.2	8,304.0	3,704.6	268.6	139.2
2014 Unincorporated – Conformity	2,094,556,247	487.8	4,884.2	2,164.5	157.6	82.0
2014 Incorporated – Conformity	3,380,471,790	783.0	7,824.9	3,487.7	252.9	131.2
2035 Combined – Conformity	5,058,910,967	538.7	4,587.3	1,282.0	42.2	38.9
2035 Unincorporated – Conformity	3,377,402,790	359.0	3,057.1	851.6	28.4	26.2
2035 Incorporated – Conformity	4,499,699,057	479.6	4,086.3	1,139.0	37.8	34.9
2035 NP Combined – Conformity	4,930,462,671	527.2	4,489.0	1,250.3	41.4	38.2
2035 NP Unincorporated – Conformity	3,271,124,265	349.7	2,977.5	825.3	27.7	25.6
SB 375 Conditions						
2014 Combined – SB 375	1,932,814,771	438.7	4,368.4	1,974.3	142.1	72.7
2014 Unincorporated – SB 375	442,310,504	99.4	988.6	448.6	32.3	16.5
2014 Incorporated – SB 375	1,490,504,353	339.3	3,379.7	1,525.7	109.8	56.3
2035 Combined – SB 375	2,715,426,962	223.2	1,912.1	553.2	16.7	15.4
2035 Unincorporated – SB 375	923,102,308	94.1	813.3	232.0	6.9	6.4
2035 Incorporated – SB 375	1,792,324,789	186.4	1,606.1	453.9	14.1	13.0
2035 NP Combined – SB 375	2,596,718,470	268.8	2,316.3	655.9	20.2	18.6
2035 NP Unincorporated – SB 375	853,305,294	87.3	753.1	214.5	6.4	5.9

NP = No Project.

Existing and Proposed General Plan Goals and Policies that Reduce the Impact

The following policies from the proposed General Plan Update will help directly reduce area and mobile sources in the county.

Housing Element

GOAL ONE. encourage the provision of adequate, affordable housing, including units for rent and for ownership for residents of all income groups, including extremely-low, very low-, low- and moderate-income households.

POLICY ONE D. The County shall encourage energy conservation in existing homes and new housing developments.

Land Use Element

GOAL SIX. Promote and protect healthy living environments

POLICY TWENTY-NINE. Support the development of a built environment that is responsive to decreasing air and water pollution, reducing the consumption of natural resources and energy, increasing the reliability of local water supplies, and reduces vehicle miles traveled by facilitating alternative modes of transportation, and promoting active living (integration of physical activities, such as biking and walking, into everyday routines) opportunities.

IMPLEMENTATION MEASURES

1. County development standards shall be evaluated and revised, as necessary, to facilitate development incorporating the following (or similar) design features:

- Alternative modes of transportation such as bicycle lanes, pedestrian paths, and facilities for public transit;
- Alternative modes of storm water management (that mimic the functions of nature); and
- Pedestrian friendly environments through appropriate setback, landscape, and wall/fencing standards.

POLICY THIRTY. New development shall be designed to facilitate the efficient extension of public transportation systems.

IMPLEMENTATION MEASURES

1. Development proposals shall be referred to the appropriate transit authority to determine the types of facilities needing to be provided, if any.

GOAL THREE (Community of Keyes). Encourage attractive and orderly development which preserves a small town atmosphere.

POLICY SIX. Provide convenient and accessible neighborhood commercial areas within the community to minimize vehicular trips needed for frequently used retail services.

Existing Goal Three, Policies One through Three of the Land Use Element would continue to improve air quality.

Circulation Element

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 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.

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.

POLICY EIGHT. Promote public transit as a viable transportation choice.

GOAL THREE TWO. 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.

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.

Conservation/Open Space Element

Existing Goal Six, Policies One through Three and Eighteen through Twenty-One of the Conservation/Open Space Element would continue to improve air quality. The above policies will also reduce air emissions from mobile sources. Taken in combination with improvements in air quality emissions standards, the resulting impact would be less than significant, as shown above in Tables 3.3-5 and 3.3-6.

Significance without Mitigation: Less than significant (no mitigation required)**Impact AQ-3: Expose sensitive receptors to substantial concentrations of carbon monoxide (less than significant)**

Elevated levels of CO concentrations are typically found in areas with significant traffic congestion. CO is a public health concern because it can cause health problems such as fatigue, headache, confusion, dizziness, and even death. Motor vehicles are the dominant source of CO emissions in most areas. High CO levels develop primarily during winter when periods of light winds combine with the formation of ground-level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. CO emission rates from motor vehicles have been declining and are expected to continue to decline in the future because of ARB's Mobile Source Program, which supports replacement of older, higher-emitting vehicles with newer vehicles, and increasingly stringent inspection and maintenance programs, as well as other regulatory requirements, such as Assembly Bill 1493 (Pavley) of 2002 that mandates regulations to reduce tailpipe greenhouse gas emissions that also improve fuel economy.

CO concentrations within the project area were evaluated following the Caltrans CO protocol (Garza et al. 1997) to evaluate whether the project would cause or contribute to localized violations of the state or federal ambient standards in the project vicinity. CO concentrations at potential sensitive receptors near congested roadways were estimated using CALINE4 dispersion modeling. Table 3.3-7 summarizes CO modeling results for existing (2014) and design year (2035) conditions.

As indicated in Table 3.3-7, future year CO concentrations will be lower than existing concentrations and no violations of the state or federal 1- or 8-hour CO standards are anticipated in the project area under cumulative-year conditions. Therefore, the impact of project traffic conditions on ambient CO levels in the project area would be less than significant.

Table 3.3-7. Carbon Monoxide Concentrations at Greatest Affected Roadway Segments

Segment	Receptor	Existing (2014) ^a		Design Year (2035) ^a	
		1-hr CO ^b	8-hr CO ^c	1-hr CO ^b	8-hr CO ^c
SR 99: Hammett Road to SR 219	1	8.8	6.0	9.5	6.5
	2	8.8	6.0	9.8	6.7
	3	8.2	5.6	8.7	5.9
	4	8.4	5.7	9.5	6.5
	5	6.9	4.7	7.8	5.3
SR 99: Beckwith Road to Carpenter Road	6	5.3	3.5	5.3	3.5
	7	4.6	3.1	4.6	3.1
	8	4.3	2.8	4.4	2.9
	9	3.4	2.2	4.7	3.1
	10	4.0	2.6	4.0	2.6
SR 99: Carpenter Road to 9th Street	11	3.9	2.6	3.9	2.6
	12	3.8	2.5	3.8	2.5
	13	3.7	2.4	3.7	2.4
	14	3.3	2.1	3.3	2.1
	15	3.1	2.0	3.1	2.0

Segment	Receptor	Existing (2014) ^a		Design Year (2035) ^a	
		1-hr CO ^b	8-hr CO ^c	1-hr CO ^b	8-hr CO ^c
SR 99: Woodland Avenue to 9th Street	16	2.8	1.8	2.8	1.8
	17	2.8	1.8	2.8	1.8
	18	2.5	1.6	2.5	1.6
	19	3.6	2.4	3.7	2.4
	20	3.6	2.4	3.7	2.4

^a Background concentrations of 2.3 ppm and 1.9 ppm were added to the modeling 1-hour and 8-hour results, respectively.

^b The federal and state 1-hour standards are 35 and 20 ppm, respectively.

^c The federal and state 8-hour standards are 9 and 9.0 ppm, respectively.

Proposed General Plan Goals and Policies that Reduce the Impact

The following policies from the proposed General Plan Update will help directly reduce area and mobile sources in the county.

Circulation Element

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 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 CD 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.

Significance without Mitigation: Less than significant (no mitigation required)

Impact AQ-4: Expose sensitive receptors to substantial pollutant concentrations (less than significant)

Toxic Air Contaminants

TACs are a category of air pollutants that have been shown to have an impact on human health, but are not classified as criteria pollutants. Light industrial, industrial, and airport industrial land uses are proposed under the General Plan Update. Potential TACs associated with these uses could include, but are not limited to, solvents, diesel exhaust, and metals (California Air Resources Board 2005).

In general, TAC concentrations are typically highest near the emissions source and decline with increased distance. The ARB recommends avoiding siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day

(California Air Resources Board 2005). Similar recommendations are provided for other source categories, including dry cleaners and gas stations. The General Plan Update does not include policies or goals that prohibit locating new sensitive receptors within 500 feet of major roadways or arterials.

As indicated in Chapter 2, *Project Description*, the General Plan Update would include changes to the text of the land use designations of the general plan, but does not propose any changes to the land use map or the existing boundaries of the land use designations.

This impact is considered less than significant.

Naturally Occurring Asbestos

Disturbance of rock and soil that contains NOA can result in exposure to the public. Asbestos most commonly occurs in serpentine rock and its parent material, ultramafic rock. Bands of NOA, trending in a north-south direction, have been identified in the western portion Stanislaus County (California Department of Conservation 2000).

Construction activities in areas known to contain ultramafic rocks may expose workers and the general public to NOA. The ARB has adopted two Airborne Toxic Control Measures (ATCMs) to control NOA. They are the Asbestos ATCM for Surfacing Applications and the Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations. The Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations requires the implementation of mitigation measures to minimize emissions of asbestos-laden dust in any area in which:

- Any portion of the area to be disturbed is located in a geographic ultramafic rock unit; or
- Any portion of the area to be disturbed has naturally-occurring asbestos, serpentine, or ultramafic rock as determined by the owner/operator, or the Air Pollution Control Officer (APCO); or
- Naturally-occurring asbestos, serpentine, or ultramafic rock is discovered by the owner/operator, a registered geologist, or the APCO in the area to be disturbed after the start of any construction, grading, quarrying, or surface mining operation.

Compliance with the Asbestos ATCM would help reduce exposure to NOA and associated health risks. This impact is considered less than significant.

Valley Fever

Disturbance of soil containing *Coccidioides* fungus could expose the general public to spores known to cause valley fever. Over 75% of valley fever cases in California have been in people who live in the San Joaquin Valley. Stanislaus County has a relatively moderate valley fever rate, with between one and 10 cases reported per 100,000 people per year between 2008 and 2012 (California Health and Human Services Agency 2013). Construction activities in areas known to contain *Coccidioides* fungus may expose workers and the general public to spores that could cause valley fever. Compliance with SJVAPCD Regulation VIII (Mitigation Measure AQ-1) would reduce the risk of contracting valley fever. This impact is considered less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact AQ-5: Expose sensitive receptors to substantial odors (less than significant)

The SJVAPCD has identified certain types of land uses as being commonly associated with odors. Based on these land uses, the SJVAPCD has established screening criteria that identify reasonable buffer distances from odor-generating facilities that would avoid exposing sensitive receptors to significant odor impacts. Table 3.3-8 summarizes the SJVAPCD's odor screening distances as a function of facility type.

Table 3.3-8. SJVAPCD Project Screening Trigger Levels for Potential Odor Sources

Type of Facility	SJVAPCD Recommended Buffer Distance (miles)
Wastewater Treatment Facilities	2
Sanitary Landfill	1
Transfer Station	1
Composting Facility	1
Petroleum Refinery	2
Asphalt Batch Plant	1
Chemical Manufacturing	1
Fiberglass Manufacturing	1
Painting/Coating Operations (e.g. auto body shops)	1
Food Processing Facility	1
Feed Lot/Dairy	1
Rendering Plant	1

Source: San Joaquin Valley Air Pollution Control District 2015.

Potential odor emitters during construction activities include diesel exhaust, asphalt paving, and the use of architectural coatings and solvents. Construction-related operations near existing receptors would be temporary, and construction activities would not be likely to result in nuisance odors that would violate SJVPACD Rule 4102. Given mandatory compliance with SJVPACD rules, no construction activities or materials are proposed that would create a significant level of objectionable odors. This impact is considered less than significant.

As indicated in Chapter 2, *Project Description*, the General Plan Update would include changes to the text of the land use designations of the general plan, but does not propose any changes to the land use map or the existing boundaries of the land use designations. Consequently, no changes to land uses (i.e., neither new land uses, such as sensitive receptors, nor odor generating facilities) would occur under the Plan. Therefore, odor impacts are considered less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

3.3.4 References Cited

Printed References

California Air Resources Board. 1998. *Findings of the Scientific Review on The Report on Diesel Exhaust*. Adopted April 22. Available: <http://www.arb.ca.gov/toxics/dieseltac/combined.pdf>. Accessed: February 9, 2012.

- . 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. Sacramento, CA. Prepared by Stationary Source Division and Mobile Source Control Division. Available: <http://www.arb.ca.gov/diesel/documents/rrpfinal.pdf>. Accessed: June 27, 2013
- . 2005. *Air Quality and Land Use Handbook*. April. Sacramento, CA.
- . 2013a. *Ambient Air Quality Standards*. Last revised: June 4, 2013. Available: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. Accessed: September 18, 2014.
- . 2013b. *2012 Estimated Annual Average Emissions*. Available: http://www.arb.ca.gov/app/emsmv/2013/emssumcat_query.php?F_DIV=-4&F_DD=Y&F_YR=2012&F_SEASON=A&SP=2013&F_AREA=CO&F_CO=50. Accessed: March 31, 2015.
- . 2014. *Area Designations Maps/ State and National*. Last Revised: August 22, 2014. Available: <http://www.arb.ca.gov/desig/adm/adm.htm>. Accessed: September 18, 2014.
- . 2015. *iADAM Air Quality Data Statistics*. Available: <http://www.arb.ca.gov/adam/index.html>. Accessed: September 18, 2014.
- California Department of Conservation. Division of Mines and Geology. 2000. *A General Location Guide for Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos*. Open-File Report 2000-19. August.
- California Health and Human Services Agency. 2013. *Valley Fever Fact Sheet*. Available: <http://www.cdph.ca.gov/HealthInfo/discond/Documents/VFGeneral.pdf>. Accessed: March 17, 2015.
- San Joaquin Valley Air Pollution Control District. 2015. *Guidance for Assessing and Mitigating Air Quality Impacts*. March 19. Fresno, CA.
- U.S. Environmental Protection Agency. 2014. *Air Data*. Last Revised: October 8, 2014. Available: http://www.epa.gov/airdata/ad_rep_mon.html. Accessed: April 2, 2015.
- . 2015. *The Greenbook Nonattainment Areas for Criteria Pollutants*. Last Revised: March 30, 2015. Available: <http://www.epa.gov/oar/oaqps/greenbk/>. Accessed: April 1, 2015.
- U.S. Geological Survey. 2000. *Operational Guidelines (version 1.0) for Geological Fieldwork in Areas Endemic for Coccidioidomycosis (Valley Fever)*.

Personal Communications

- Siong, Patia. Air Quality Planner. San Joaquin Valley Unified Air Pollution Control District, Modesto, CA. May 23 and September 13, 2011—email with Shannon Hatcher of ICF International regarding construction health risk assessment procedures for diesel exhaust from construction equipment in the San Joaquin Valley Air Basin, PM10 and PM2.5 construction thresholds, Dust Control Plan to satisfy Regulation VIII requirements, and use of use a Voluntary Emission Reduction Agreement to mitigate CEQA impacts to less than significant.

3.4 Biological Resources

3.4.1 Introduction

This section discusses the impacts of the plan updates with respect to biological resources. It lists the thresholds of significance that form the basis of the environmental analysis, provides environmental setting information that is relevant to biological resources, describes the biological resources study area and major sources used in the analysis, and assesses whether the plan updates would result in significant impacts with respect to biological resources.

Study Area

The biological resources study area for this EIR is generally defined as Stanislaus County.

3.4.2 Environmental Setting

This section describes the federal, state, and local regulations and policies that are applicable to the plan updates, and the existing conditions pertaining to biological resources in the study area. The existing conditions constitute the baseline for this environmental analysis.

Regulatory Setting

This section describes the federal, state, and local regulations related to biological resources that would apply to the plan updates.

Federal

Endangered Species Act

Pursuant to the federal Endangered Species Act (ESA), the U.S. Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service (NMFS) have authority over projects that may result in “take” of a species listed as threatened or endangered under the act. Take is defined under the ESA, in part, as killing, harming, or harassing. Under federal regulations, take is further defined to include habitat modification or degradation that results, or is reasonably expected to result, in death or injury to wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. If it is likely that a project would result in take of a federally listed species, an incidental take permit, under Section 7 (interagency consultation) or Section 10 (Habitat Conservation Plan) of the ESA must be obtained from the appropriate federal agency before the project may proceed.

Critical habitat is also defined and used in the ESA. It is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act, as amended in 1964, was enacted to protect fish and wildlife when federal actions result in the control or modification of a natural stream or body of water. The statute requires federal agencies to take into consideration the effect that water-related projects would have on fish and wildlife resources. Consultation and coordination with USFWS and the California Department of Fish and Wildlife (CDFW) are required to address ways to prevent loss of and damage to fish and wildlife resources, and to further develop and improve these resources.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) domestically implements a series of international treaties that provide for migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act further provides that it is unlawful, except as permitted by regulations, “to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird...” (U.S. Code [USC], Title 16, Section 703). This prohibition includes both direct and indirect acts, although harassment and habitat modification are not included unless they result in direct loss of birds, nests, or eggs. The current list of species protected by the MBTA can be found in the March 1, 2010 *Federal Register* (75 FR 9281). This list comprises several hundred species, including essentially all native birds. Permits for take of nongame migratory birds can be issued only for specific activities, such as scientific collecting, rehabilitation, propagation, education, taxidermy, and protection of human health and safety and of personal property. USFWS publishes a list of birds of conservation concern to identify migratory nongame birds that are likely to become candidates for listing under ESA without additional conservation actions. The list is intended to stimulate coordinated and collaborative conservation efforts among federal, state, tribal, and private parties.

The Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) (16 USC 668) prohibits take and disturbance of individuals and nests. Take permits for birds or body parts are limited to religious, scientific, or falconry pursuits. However, the BGEPA was amended in 1978 to allow mining developers to apply to USFWS for permits to remove inactive golden eagle (*Aquila chrysaetos*) nests in the course of “resource development or recovery” operations. With the 2007 removal of bald eagles (*Haliaeetus leucocephalus*) from the ESA list of threatened and endangered species, USFWS issued new regulations to authorize the limited take of bald eagles and golden eagles under the BGEPA, where the take to be authorized is associated with otherwise lawful activities. A final Eagle Permit Rule was published on September 11, 2009 (74 FR 46836–46879; Code of Federal Regulations [CFR], Title 50, Section 22.26).

A permit authorizes limited, non-purposeful take of bald eagles and golden eagles, and can be applied for by individuals, companies, government agencies (including tribal governments), and other organizations to allow disturbance or otherwise take eagles in the course of conducting lawful activities, such as operating utilities and airports. Under BGEPA, take is defined as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest or disturb.” Disturb is defined in the regulations as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle; (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior; or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.” Most permits issued under the new regulations authorize disturbance. In limited cases, a

permit may authorize the physical take of eagles, but only if every precaution is first taken to avoid physical take.

USFWS issued the Eagle Conservation Plan Guidance (Eagle Guidance) intended to assist parties to avoid, minimize, and mitigate adverse effects on bald and golden eagles (U.S. Fish and Wildlife Service 2013). The Eagle Guidance calls for scientifically rigorous surveys, monitoring, assessment, and research designs proportionate to the risk to eagles. The Eagle Guidance describes a process by which wind energy developers can collect and analyze information that could lead to a programmatic permit to authorize unintentional take of eagles at wind energy facilities. USFWS recommends that eagle conservation plans be developed in five stages. Each stage builds on the prior stage, such that together the process is a progressive, increasingly intensive look at likely effects on eagles of the development and operation of a particular site and configuration. Additional refinements to the Eagle Guidance are expected at some point in the future.

Clean Water Act

Wetlands and other waters of the United States are protected under Section 404 of the Clean Water Act (CWA). Any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands, is subject to regulation by the U.S. Army Corps of Engineers (USACE). Certification from the applicable Regional Water Quality Control Board (RWQCB) also is required when a proposed activity may result in discharge into waters of the United States, pursuant to CWA Section 401 and EPA's Section 404(b)(1) guidelines. Waters of the United States is defined to encompass navigable waters of the United States; interstate waters; all other waters where their use, degradation, or destruction could affect interstate or foreign commerce; tributaries of any of these waters; and wetlands that meet any of these criteria or are adjacent to any of these waters or their tributaries.

Rivers and Harbors Appropriation Act of 1899

The River and Harbors Appropriation Act of 1899 (RHA) addresses activities that involve the construction of dams, bridges, dikes, and other structures across any navigable water. RHA Section 10 requires authorization from USACE for the construction of any structure in, over, or under any navigable waters of the United States. The law applies to any dredging, excavation, filling, or other modification of a navigable water of the United States, as well as to all structures, including bank protection (e.g., riprap). The San Joaquin River, Stanislaus River, and Tuolumne River are navigable waters subject to the requirements of the RHA.

Executive Order 11990: Protection of Wetlands

Executive Order 11990 (May 24, 1977) established the protection of wetlands and riparian systems as the official policy of the federal government. The executive order requires all federal agencies to consider wetland protection as an important part of their policies; take action to minimize the destruction, loss, or degradation of wetlands; and preserve and enhance the natural and beneficial values of wetlands.

Federal Noxious Weed Act and Code of Federal Regulations (Title 7, Part 360)

These laws and regulations are primarily concerned with the introduction of federally designated noxious weed plants or seeds across the United States' international borders. The Federal Noxious

Weed Act (7 USC 2801–2813) also regulates the interstate movement of designated noxious weeds under the U.S. Department of Agriculture’s permit system.

Executive Order 11312: Invasive Species

Executive Order 11312 (February 3, 1999) directs all federal agencies to prevent and control the introduction and spread of invasive nonnative species in a cost-effective and environmentally sound manner to minimize their effects on economic, ecological, and human health. The executive order was intended to build upon existing laws, such as the National Environmental Policy Act (NEPA), the Nonindigenous Aquatic Nuisance Prevention and Control Act, the Lacey Act, the Plant Pest Act, the Federal Noxious Weed Act, and ESA. The executive order established a national Invasive Species Council composed of federal agencies and departments, as well as a supporting Invasive Species Advisory Committee composed of state, local, and private entities. The council and advisory committee oversee and facilitate implementation of the executive order, including preparation of the National Invasive Species Management Plan. Federal activities addressing invasive aquatic species are now coordinated through this council and through the National Aquatic Nuisance Species Task Force.

State

California Environmental Quality Act

CEQA is the regulatory framework by which California public agencies identify and mitigate significant environmental impacts. A project normally has a significant environmental impact on biological resources if it substantially affects a rare or endangered species or the habitat of that species, substantially interferes with the movement of resident or migratory fish or wildlife, or substantially diminishes habitat for fish, wildlife, or plants. The State CEQA Guidelines define rare, threatened, and endangered species as those listed under ESA or the California Endangered Species Act (CESA) or any other species that meet the criteria of the resource agencies or local agencies (e.g., species of special concern, as designated by CDFW). The guidelines state that the lead agency preparing an EIR must consult with and receive written findings from CDFW concerning project impacts on species listed as endangered or threatened. The effects of a proposed project on these resources are important in determining whether the project has significant environmental impacts under CEQA.

CDFW maintains lists of “Special Plants” that include all the plant taxa inventoried by the California Natural Diversity Database (CNDDB), in addition to those listed as threatened or endangered (California Department of Fish and Wildlife 2014a). These species have no formal protection under CESA, but plants with a California Rare Plant Rank of 1A, 1B, and 2 meet the definitions of Section 1901 of the California Fish and Game Code and may qualify for state listing. Pursuant to Section 15380(d) of CEQA, such plant species are considered to be endangered, rare, or threatened for this analysis.

California Endangered Species Act

CESA (California Fish and Game Code Sections 2050–2116) states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants and their habitats that are threatened with extinction and those experiencing a significant decline that, if not halted, would lead to a threatened or endangered designation will be protected or preserved.

Under Section 2081 of the California Fish and Game Code, a permit from CDFW is required for projects that could result in the take of a species that is state-listed as threatened or endangered. Under CESA, take is defined as an activity that would directly or indirectly kill an individual of a species. The definition does not include harm or harass, as does the definition of take under ESA. Consequently, the threshold for take under CESA is higher than that under ESA. For example, habitat modification is not necessarily considered take under CESA.

Fully Protected Species

Sections 3511, 3513, 4700, and 5050 of the California Fish and Game Code pertain to fully protected wildlife species (birds in Sections 3511 and 3513, mammals in Section 4700, and reptiles and amphibians in Section 5050) and strictly prohibit the take of these species. CDFW cannot issue a take permit for fully protected species, except under narrow conditions for scientific research or the protection of livestock, or if a natural community conservation plan has been adopted.

California Native Plant Protection Act

The California Native Plant Protection Act (CNPPA) of 1977 gave the California Fish and Game Commission the authority to list plant species as rare or endangered and authorized them to adopt regulations prohibiting importation of rare and endangered plants into California, take of rare and endangered plants, and sale of rare and endangered plants. CESA defers to the CNPPA, which ensures that state-listed plant species are protected when state agencies are involved in projects subject to CEQA. In this case, plants listed as rare under the CNPPA are protected under CEQA, rather than CESA.

Protection of Birds and Raptors

Section 3503 of the California Fish and Game Code prohibits the killing of birds and/or the destruction of bird nests. Section 3503.5 prohibits the killing of raptor species and/or the destruction of raptor nests. Typical violations include destruction of active bird and raptor nests as a result of tree removal, and failure of nesting attempts (loss of eggs and/or young) as a result of disturbance of nesting pairs caused by nearby human activity. Section 3513 prohibits any take or possession of birds designated by the MBTA as migratory nongame birds except as allowed by federal rules and regulations pursuant to the MBTA.

Sections 1600–1603 of the California Fish and Game Code

Sections 1600–1603 of the California Fish and Game Code state that it is unlawful for any person or agency to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources, or to use any material from the streambeds, without first notifying CDFW. A Lake and Streambed Alteration Agreement (LSAA) must be obtained if effects are expected to occur. The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports wildlife, fish, or other aquatic life. This definition includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation. CDFW's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), waters of the state fall under jurisdiction of the nine RWQCBs. Projects in Stanislaus County fall under the jurisdiction of the Central Valley RWQCB. Under this act, each RWQCB must prepare and periodically update water quality control basin plans (basin plans), each of which sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution. Pursuant to CWA Section 401, an applicant for a Section 404 permit to conduct any activity that may result in discharge into navigable waters must provide a certification from the RWQCB that such discharge will comply with state water quality standards. Projects that affect wetlands or other waters of the state must file a report of waste discharge with the RWQCB, which then issues waste discharge requirements (WDRs).

California Wetlands Conservation Policy

The goals of the California Wetlands Conservation Policy, adopted in 1993 (Executive Order W-59-93 [August 23, 1993]), are “to ensure no overall net loss, and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California, in a manner that fosters creativity, stewardship, and respect for private property”; to reduce procedural complexity in the administration of state and federal wetlands conservation programs; and to make restoration, landowner incentive programs, and cooperative planning efforts the primary focus of wetlands conservation.

State Lands Commission

The State Lands Commission (SLC) has jurisdiction and management control over those public lands of the State of California received by the State upon its admission to the United States in 1850 (“sovereign lands”). Generally, these sovereign lands include all ungranted tidelands and submerged lands and beds of navigable rivers, streams, lakes, bays, estuaries, inlets, and straits. The SLC manages these sovereign lands for the benefit of the State, subject to the Public Trust, for water-related commerce, navigation, fisheries, recreation, open space, and other recognized Public Trust uses. For construction in the bed of navigable rivers, a land use lease from the SLC is required upon completion of CEQA review.

Local

Stanislaus County General Plan

The Stanislaus County General Plan includes several goals and policies to protect natural resources. The goals and policies listed below are relevant to biological resources in the county and can be found in Chapter 1, *Land Use Element*, and Chapter 3, *Conservation/Open Space Element*, of the plan.

Land Use Element

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY SEVEN. Riparian habitat along the rivers and natural waterways of Stanislaus County shall to the extent possible be protected.

Conservation/Open Space Element

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.

POLICY TWO. Assure compatibility between natural areas and development.

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.

POLICY FOUR. Protect and enhance oak woodlands and other native hardwood habitat.

IMPLEMENTATION MEASURE

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, to include a management plan for the protection and enhancement of oak woodlands and other native hardwood habitat.

GOAL TWO. Conserve water resources and protect water quality in the County.

POLICY SIX. Preserve vegetation to protect waterways from bank erosion and siltation.

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.

GOAL NINE. Manage extractive mineral resources to ensure an adequate supply without degradation of the environment.

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.

POLICY THIRTY. Habitats of rare and endangered fish and wildlife species 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 Wildlife through various sources which include the Stanislaus Audubon Society, California Native Plant Society, and the Sierra Club.

Existing Conditions

The county is situated in the Great Central Valley subdivision of the California Floristic Province in San Joaquin County (Baldwin et al. 2012:41–43). The topography of central part of the county is relatively level, while the west section extends into the Diablo Range and the east into the foothills of the Sierra Nevada.

Land Cover Types

For the purposes of this document, land cover in Stanislaus County has been categorized into 13 types, primarily based on the Wildlife-Habitat Relationships (WHR) classification of vegetation communities. The WHR system was used for the Gap Analysis Program (GAP) mapping of vegetation communities in California, which was the most complete resource to use as the basis for existing conditions in Stanislaus County (University of California, Santa Barbara 2002). Due to the size of the county, number of land cover types, and resulting complexity of the map, several of the GAP land

cover types were combined, where the descriptions, wildlife habitat functions, and agency regulation of the type would be essentially the same (e.g., chamise-redshank chaparral and mixed chaparral are combined into a single chaparral cover type). Additional available data allowed for inclusion of an additional type—annual grassland/vernal pool complex. (California Department of Fish and Game 1998) Table 3.4-1 identifies the combined land cover types mapped in the county and a crosswalk to the corresponding WHR types. Figure 3.4-1 shows the locations of the combined mapped types.

Table 3.4-1. Land Cover Types in Stanislaus County

Land Cover Type	Corresponding WHR Type(s) on GAP Map
Oak woodland	Blue oak woodland Valley oak woodland
Blue oak-foothill pine	Blue oak-digger pine
Valley foothill riparian	Valley foothill riparian
Chaparral	Chamise-redshank chaparral Mixed chaparral
Diablan sage scrub	Diablan sage scrub ^a
Annual grassland	Annual grassland
Vernal pool/Annual grassland complex	Annual grassland
Freshwater emergent wetland	Fresh emergent wetland
Riverine	Riverine
Lacustrine	Lacustrine
Agriculture	Cropland Irrigated hayfield Irrigated row and field crops Orchard-vineyard
Urban	Urban
Barren	Barren

^a The vegetation community name Diablan sage scrub is used in the GAP data, but is based on Holland (1986) and is not a WHR type. It is tracked by this name in the CNDDDB.

The county supports both common and sensitive land cover types. Common types are vegetation communities with low plant species diversity that are widespread. These types may reestablish naturally after disturbance, support primarily nonnative plant species, or be highly managed. They are not generally protected by agencies unless the specific site is habitat for or supports special-status species (e.g., raptor foraging or nesting habitat, upland habitat in a wetland watershed). The common land cover types in the county include agriculture and annual grassland. Urban and barren land cover types are not considered vegetation communities and are not sensitive.

Sensitive land cover types are rare vegetation communities with limited distribution. They may have high species diversity, high productivity, an unusual nature, or a declining status. Local, state, and federal agencies consider these types important, and compensation for loss of sensitive types is generally required by agencies. The general plan includes policies to protect oak woodland, native

hardwood habitat, riparian, vernal pools, and other sensitive habitats. The CNDDDB contains a current list of rare natural communities throughout the state. Under state Public Resources Code (Section 21083.4), conservation of and mitigation for impacts on oak woodlands are required. USFWS considers certain types, such as wetlands and riparian communities, important to wildlife; and USACE and EPA consider wetlands important for water quality and wildlife. Waters of the United States and waters of the State are regulated by the USACE and the RWQCB, respectively. The types in the county that are considered sensitive are oak woodland, blue oak-foothill pine, valley foothill riparian, chaparral, Diablan sage scrub, vernal pool/annual grassland complex, freshwater emergent wetland, riverine, and lacustrine.

Locations, dominant plant species, and typical wildlife species found in vegetated and unvegetated land cover types within the county are described below. No field visits were conducted for this analysis, and description of plant species in each cover type are based on information in *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988), with updates and additional species range information from the Consortium of California Herbaria (Consortium of California Herbaria 2014).

Oak Woodland

This cover type is a combination of the GAP-mapped blue oak woodland and valley oak woodland types. Oak woodland occurs in the Diablo Range on the west side of the county and in the Sierra foothills on the eastern edge of the county.

Trees in blue oak woodland are predominantly blue oak (*Quercus douglasii*), associated with valley oak (*Quercus lobata*) and interior live oak (*Quercus wislizenii*). Shrub species in this woodland commonly include California buckeye (*Aesculus californica*), common manzanita (*Arctostaphylos manzanita*), ceanothus (*Ceanothus* spp.), California coffeeberry (*Frangula californica*), redberry (*Rhamnus crocea*), and poison oak (*Toxicodendron diversilobum*). Annual grasses and forbs dominate the herbaceous layer.

Valley oak woodland ranges in tree density from savannas of annual grasslands with few trees to dense woodlands. Valley oak is the dominant tree, but it can be associated with California sycamore (*Platanus racemosa*), southern black walnut (*Juglans californica*), interior live oak, box elder (*Acer negundo* var. *californica*), and blue oak. Shrub species include California coffeeberry, poison oak, and blackberry (*Rubus* spp.). As in blue oak woodland, annual grasses and forbs dominate the herbaceous layer.

Oak woodlands provide important foraging and breeding habitat for wildlife, including migratory species. Common wildlife species that use oak woodlands include western fence lizard (*Sceloporus occidentalis*), common king snake (*Lampropeltis getula*), western scrub jay (*Aphelocoma californica*), yellow-billed magpie (*Pica nuttalli*), California quail (*Callipepla californica*), oak titmouse (*Baeolophus inornatus*), acorn woodpecker (*Melanerpes formicivorus*), red-shouldered hawk (*Buteo lineatus*), western gray squirrel (*Sciurus griseus*), California ground squirrel (*Otospermophilus beecheyi*), and mule deer (*Odocoileus hemionus*).

Local and state agencies recognize native oak woodlands as sensitive vegetation communities, and the Stanislaus County General Plan includes policies for the protection of oak woodlands and native hardwood habitat and maps of the locations of oak woodlands.

Blue Oak–Foothill Pine

Blue oak–foothill pine occurs at the western edge of the county in the Diablo Range, at slightly higher elevations than oak woodland and intergrading with chaparral and coastal scrub. Blue oak–foothill pine is co-dominated by foothill pine (*Pinus sabiniana*) and blue oak. Other associated tree species in this cover type are interior live oak, valley oak, and California buckeye. The understory includes a shrub layer with common manzanita, ceanothus, redberry, California coffeeberry, poison oak, and blue elderberry (*Sambucus nigra*). Annual grasses and forbs occur in the ground layer.

Blue oak–foothill pine woodlands provide breeding and foraging habitat for many wildlife species. Common wildlife species that use blue oak–foothill pine include western fence lizard, northern alligator lizard (*Elgaria coerulea*), western diamondback rattlesnake (*Crotalus atrox*), western scrub jay, yellow-billed magpie, California quail, oak titmouse, acorn woodpecker, spotted towhee (*Pipilo maculatus*), red-shouldered hawk, Cooper’s hawk (*Accipter cooperii*), western gray squirrel, gray fox (*Urocyon cinereoargenteus*), and mule deer.

Although blue oak–foothill pine is not specifically recognized as a sensitive vegetation community, the Stanislaus County General Plan includes a policy for the protection of native hardwood habitat and maps of the locations of blue oak–foothill pine woodland (native hardwood habitat).

Valley Foothill Riparian

Valley foothill riparian occurs along the major rivers and creeks in the county, including San Joaquin River, Stanislaus River, small patches of the Tuolumne River, Orestimba Creek, and Dry Creek. Dominant tree species in riparian habitat include boxelder (*Acer negundo*), white alder (*Alnus rhombifolia*), Oregon ash (*Fraxinus latifolia*), California sycamore, Fremont cottonwood (*Populus fremontii*), valley oak, and a variety of willows (*Salix* sp.). Shrubs include blackberry, blue elderberry, and California wild grape (*Vitis californica*).

Valley foothill riparian provides food, water, migration and dispersal corridors, escape cover, nesting, and thermal cover for an abundance of wildlife. Common wildlife species that use valley foothill riparian include Sierran tree frog (*Pseudacris sierra*), common kingsnake, yellow-rumped warbler (*Dendroica coronata*), warbling vireo (*Vireo gilvus*), tree swallow (*Tachycineta bicolor*), bushtit (*Psaltriparus minimus*), California towhee (*Pipilo crissalis*), scrub jay, great horned owl (*Bubo virginianus*), northern flicker (*Colaptes auratus*), Bullock’s oriole (*Icterus bullockii*), Botta’s pocket gopher (*Thomomys bottae*), broad-footed mole (*Scapanus latimanus*), brush rabbit (*Sylvilagus bachmani*), raccoon (*Procyon lotor*), and mule deer.

State and federal agencies recognize riparian habitats as sensitive vegetation communities, and the Stanislaus County General Plan includes a policy for the protection of vegetation along waterways. Riparian areas that also meet criteria as wetlands are protected under the CWA. The CNDDDB inventory has records of four specific types of sensitive riparian communities in the County—Great Valley cottonwood riparian forest, Great Valley mixed riparian forest, Great Valley oak riparian forest, and sycamore alluvial woodland.

Chaparral

This cover type is a combination of the GAP-mapped chamise-redshank chaparral and mixed chaparral types. Chaparral occurs in the Diablo Range at the western edge of the county.

In Stanislaus County, chamise-redshank chaparral is dominated by chamise (*Adenostoma fasciculatum*), as redshank (*Adenostoma sparsifolium*) is a southern California species. Associated species with chamise may include California coffeeberry, redberry, and poison oak.

Mixed chaparral is a diverse vegetation community that may include scrub oak, chaparral oak, ceanothus, and manzanita as dominants. Associated species can include chamise, California buckeye, birchleaf mountain mahogany (*Cercocarpus betuloides*), yerba-santa (*Eriodictyon californicum*), coffeeberry, silk-tassel (*Garrya congdonii*), Montana chaparral pea (*Pickeringia montana*), holly leaf cherry (*Prunus ilicifolia*), and poison oak,

Common wildlife species found in chaparral include western fence lizard, western diamondback rattlesnake, western scrub jay, California towhee, spotted towhee, California thrasher (*Toxostoma redivivum*), Lawrence's goldfinch (*Carduelis lawrencei*), sage sparrow (*Amphispiza belli*), greater roadrunner (*Geococcyx californianus*), Bewick's wren (*Thryomanes bewickii*), Botta's pocket gopher, California ground squirrel, and mule deer.

The CNDDDB recognizes chamise-redshank chaparral and mixed chaparral on serpentine soils, which occur in the Diablo Range, as sensitive vegetation communities.

Diablan Sage Scrub

Diablan sage scrub occurs in the Diablo Range at the western edge of the county. Dominant species in Diablan sage scrub include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and black sage (*Salvia mellifera*) in association with sticky monkeyflower (*Mimulus aurantiacus*). Diablan sage scrub generally occurs on shallow, rocky soils on hot southern exposures.

Common wildlife species found in Diablan sage scrub include western fence lizard, western diamondback rattlesnake, western scrub jay, California towhee, spotted towhee, California thrasher, Lawrence's goldfinch, sage sparrow, greater roadrunner, Bewick's wren, Botta's pocket gopher, California ground squirrel, and mule deer.

The CNDDDB recognizes Diablan sage scrub as a sensitive vegetation community.

Annual Grassland

Much of the annual grassland in the county has been removed, but the remaining areas are mostly in the foothills of the Diablo Range in the west and of the Sierras in the east. Annual grasslands also form the understory for oak woodlands, and weedy annual grassland habitat occurs on undeveloped land within urban areas. Annual grasslands in the county are dominated by nonnative annual grasses and annual and perennial forbs. Typical annual grass species include wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), Italian rye grass (*Festuca perennis*), and foxtail barley (*Hordeum murinum*). Commonly found nonnative forbs include wild mustard (*Brassica* sp.), filarees (*Erodium* spp.), wild radish (*Raphanus raphanistrum*), and clovers (*Trifolium* spp.); natives may include fiddleneck (*Amsinckia* spp.), California poppy (*Eschscholzia californica*), popcorn flower (*Plagiobothrys* sp.), and native clovers (*Trifolium* spp.), as well as many others.

Common wildlife species found in annual grassland include western fence lizard, western meadowlark (*Sturnella neglecta*), mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), Brewer's blackbird (*Euphagus cyanocephalus*), red-winged blackbird (*Agelaius*

phoeniceus), red-tailed hawk (*Buteo jamaicensis*), Botta's pocket gopher, and California ground squirrel.

Vernal Pool/Annual Grassland Complex

Vernal pool/annual grassland complex occurs predominantly on the east side of the county in the part of the valley at the base of the foothills. Smaller patches of this complex occur near the east side of the San Joaquin River and near the west side of the river at the Merced County line. The annual grassland in this complex is generally as described above. Vernal pools support a variety of native and nonnative species, including foxtail (*Alopecurus* spp.), annual hairgrass (*Deschampsia danthonioides*), downingia (*Downingia* spp.), spikerush (*Eleocharis* spp.), coyote thistle (*Eryngium* spp.), popcorn flower, and woolly marbles (*Psilocarphus* spp.).

Vernal pool complexes support common aquatic species such as California linderiella (*Linderiella occidentalis*), Sierran tree frog, and western toad (*Bufo boreas*). Vernal pools are also frequented by migratory waterfowl and shorebirds.

Vernal pool wetlands are within RWQCB and/or USACE jurisdiction and may be regulated under the CWA. Vernal pools are also habitat for a number of special-status plants and animals. Vernal pool is considered a sensitive natural community.

Freshwater Emergent Wetland

Freshwater emergent wetland occurs in a few patches in the western part of the county. This wetland type is wetter than seasonal wetlands and may be perennially wet. Dominant species include sedges (*Carex* spp.), arrowhead (*Sagittaria* spp.), tule (*Schoenoplectus acutus* var. *occidentalis*), and cattail (*Typha* spp.).

Freshwater emergent wetlands are important sources of foraging, wintering, and nesting habitat for migratory birds. These areas are used by numerous waterfowl and shorebirds and small mammals.

Freshwater emergent wetlands are within USACE and RWQCB jurisdiction and are regulated under the CWA. It is considered a sensitive natural community.

Riverine

The riverine cover type includes the three major rivers in the county—the San Joaquin, Stanislaus, and Tuolumne—as well as Calaveras River in the northernmost corner, Dry Creek, and smaller streams and ditches. These features are primarily open water, but may support some floating aquatic vegetation and freshwater emergent wetland along the river banks. Riparian habitat also occurs adjacent to the riverine cover type.

Riverine habitat in California is important for native fish species and for wildlife that use these areas for foraging. Common wildlife species found in riverine habitat both native and nonnative fish species and various other wildlife species that frequent riverine habitat for drinking and foraging.

Riverine habitats are within USACE and RWQCB jurisdiction and are regulated under the CWA. Riverine is considered a sensitive natural community.

Lacustrine

The lacustrine cover type includes lakes and ponds, which are scattered throughout the valley part of the county. These features are primarily open water, but may support some floating aquatic vegetation and freshwater emergent wetland at the edges. The largest lacustrine features are reservoirs, including Woodward Reservoir, Modesto Reservoir, and Turlock Lake.

Lacustrine habitats provide important habitat for migratory waterfowl and shorebirds. Common wildlife species that use these areas include Sierran tree frog, western toad, mallard (*Anas platyrhynchos*), northern shoveler duck (*Anas clypeata*), common merganser (*Mergus merganser*), and North American beaver (*Castor canadensis*).

Lacustrine habitats are within USACE and RWQCB jurisdiction and are regulated under the CWA. They are considered sensitive natural communities.

Agriculture

Agriculture is the most extensive cover type in the county, occupying the majority of the valley area in the central section. This cover type is a combination of several GAP data types, including cropland, irrigated hayfield, irrigated row and field crops, and orchard-vineyard, which are more specific types than those included in the WHR system. The common element of most agricultural cover types is that they are monocultures and provide minimal habitat diversity. Some types are annuals that are managed using crop rotation, with the exception of orchards and vineyards, which may persist for decades. The irrigated types of agriculture may have standing water for prolonged periods, e.g., rice fields.

Agricultural areas are often used by wildlife species for foraging and cover. Common species that use agricultural areas include mourning dove, American crow, Brewer's blackbird, red-winged blackbird, red-tailed hawk, pocket gophers, and several other small rodents.

Urban

The urban cover type includes the developed areas in the cities of Ceres, Hughson, Modesto, Newman, Oakdale, Patterson, Riverbank, Turlock, and Waterford, and the unincorporated communities of Denair, Keyes, and Salida. The smaller unincorporated communities in the county were not large enough to be included in the coarse-scaled GAP mapping, and, therefore, are not shown on Figure 3.4-1. Urban areas contain landscaped vegetation that generally includes a mix of native and nonnative, horticultural species. Lawns, flowering shrubs, and shade trees are common in residential areas and around business park developments.

Urban areas provide habitat for many common bird species that utilize landscaped areas for foraging, cover, and nesting, such as American robin (*Turdus migratorius*), mourning dove, and northern mockingbird (*Mimus polyglottos*).

Barren

Barren land cover occurs in the northeast and southeast corners of the County and in an area on the east side of I-5 northwest of Newman. There are also designated aggregate mining areas along the Stanislaus and Tuolumne rivers. This cover type correlates with locations of dredge tailings and aggregate mining in the county and is generally disturbed ground with little to no vegetation. The

areas shown on Figure 3.4-1 may show larger barren areas than current conditions, and barren ground may become revegetated.

Barren areas provide very low quality habitat for wildlife because they provide no food or cover.

Wetlands and Other Waters

Wetlands and other waters include several of the land cover types discussed above—freshwater emergent wetland, lacustrine, riverine, some areas of valley-foothill riparian, and vernal pools within the vernal pool/annual grassland complex. These land cover types are regulated as waters of the United States by the USACE and/or as waters of the State by the RWQCB.

Special-Status Species

For the purposes of CEQA, the following categories are considered special-status species.

- Species listed or proposed for listing as threatened or endangered under ESA (50 CFR 17.12 [listed plants], 50 CFR 17.11 [listed animals], and various notices in the *Federal Register* [proposed species]).
- Species that are candidates for possible future listing as threatened or endangered under ESA (79 FR 72450, December 5, 2014).
- Species listed or proposed for listing by the State of California as threatened or endangered under CESA (California Code of Regulations [CCR], Title 14, Section 670.5).
- Species that meet the definitions of rare or endangered under State CEQA Guidelines Section 15380.
- Animals fully protected in California (California Fish and Game Code Section 3511 [birds], 4700 [mammals], and 5050 [amphibians and reptiles]).
- Animal species of special concern (SSC) to CDFW.
- Plants listed as rare under the CNPPA (California Fish and Game Code Section 1900 et seq.).
- Plants with a California Rare Plant Rank of 1A, 1B, 2A, 2B, 3, and 4 (California Native Plant Society 2014).

There are numerous animal and plant species within the county that are given special status under state and federal law because they are rare, threatened, endangered, or otherwise identified as needing protection in order to ensure their survival. CDFW maintains the CNDDDB, a statewide inventory of reported occurrences of special-status plant and animal species. This includes federal and state listed species, as well as plants that are considered threatened (“Rare Plant Rank” on Table 3.4-2). Because the project is neither site-specific nor proposing an actual development project, the following information from the CNDDDB (California Department of Fish and Wildlife 2014b), the California Native Plant Society (CNPS) Inventory (California Native Plant Society 2014), and the USFWS species list (U.S. Fish and Wildlife Service 2014a) is for the entire county. Table 3.4-2 lists the special-status plant species that have been found to occur in Stanislaus County. Table 3.4-3 lists the special-status animal species found in Stanislaus County. These represent the species reported by the CNDDDB and CNPS in November 2014 and from a USFWS species list for the county on December 10, 2014.

Special-Status Plants

The 69 special-status plants identified as occurring in Stanislaus County are found in a variety of natural habitats, including annual grassland, vernal pool, oak woodland, riparian, and chaparral. Of these species, 9 are state and/or federally listed—succulent (fleshy) owl’s clover, Hoover’s spurge, Tracy’s eriastrum, Delta button-celery, Colusa grass, San Joaquin Valley Orcutt grass, hairy Orcutt grass, Hartweg’s golden sunburst, and Greene’s tuctoria. Table 3.4-2 lists all of the 69 species identified and their CNPS, federal, and state status.

Table 3.4-2. Special-Status Plants Occurring in Stanislaus County

Species	Rare Plant Rank	Federal Status	California Status
Santa Clara thornmint <i>Acanthomintha lanceolata</i>	4.2	–	–
Red-flowered bird’s-foot trefoil <i>Acmispon rubriflorus</i>	1B.1	–	–
Sharsmith’s onion <i>Allium sharsmithiae</i>	1B.3	–	–
California androsace <i>Androsace elongate</i> ssp. <i>acuta</i>	4.2	–	–
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	1B.2	–	–
Heartscale <i>Atriplex cordulata</i> var. <i>cordulata</i>	1B.2	–	–
Crownscale <i>Atriplex coronata</i> var. <i>coronata</i>	4.2	–	–
Brittlescale <i>Atriplex depressa</i>	1B.2	–	–
Lesser saltscale <i>Atriplex minuscula</i>	1B.1	–	–
Vernal pool smallscale <i>Atriplex persistens</i>	1B.2	–	–
Subtle orache <i>Atriplex subtilis</i>	1B.2	–	–
Big tarplant <i>Blepharizonia plumosa</i>	1B.1	–	–
Sierra bolandra <i>Bolandra californica</i>	4.3	–	–
Round-leaved filaree <i>California macrophylla</i>	1B.1	–	–
Oakland star-tulip <i>Calochortus umbellatus</i>	4.2	–	–
Hoover’s calycadenia <i>Calycadenia hooveri</i>	1B.3	–	–
Santa Cruz Mountains pussypaws <i>Calyptridium parryi</i> var. <i>hesseae</i>	1B.1	–	–
Chaparral harebell <i>Campanula exigua</i>	1B.2	–	–
Sharsmith’s harebell <i>Campanula sharsmithiae</i>	1B.2	–	–

Species	Rare Plant Rank	Federal Status	California Status
Succulent (fleshy) owl's-clover <i>Castilleja campestris</i> var. <i>succulenta</i>	1B.2	T	E
Lemmon's jewelflower <i>Caulanthus lemmonii</i>	1B.2	-	-
Hoover's spurge <i>Chamaesyce hooveri</i>	1B.2	T	-
Mt. Hamilton fountain thistle <i>Cirsium fontinale</i> var. <i>campylon</i>	1B.2	-	-
Brewer's clarkia <i>Clarkia breweri</i>	4.2	-	-
Beaked clarkia <i>Clarkia rostrata</i>	1B.3	-	-
Serpentine collomia <i>Collomia diversifolia</i>	4.3	-	-
Small-flowered morning-glory <i>Convolvulus simulans</i>	4.2	-	-
Hoover's cryptantha <i>Cryptantha hooveri</i>	1A	-	-
Mariposa cryptantha <i>Cryptantha mariposae</i>	1B.3	-	-
Hospital Canyon larkspur <i>Delphinium californicum</i> ssp. <i>interius</i>	1B.2	-	-
Dwarf downingia <i>Downingia pusilla</i>	2B.2	-	-
Tracy's eriastrum <i>Eriastrum tracyi</i>	3.2	-	R
Bay buckwheat <i>Eriogonum umbellatum</i> var. <i>bahiiforme</i>	4.2	-	-
Jepson's woolly sunflower <i>Eriophyllum jepsonii</i>	4.3	-	-
Delta button-celery <i>Eryngium racemosum</i>	1B.1	-	E
Spiny-sepaed button-celery <i>Eryngium spinosepalum</i>	1B.2	-	-
Diamond-petaled California poppy <i>Eschscholzia rhombipetala</i>	1B.1	-	-
Stinkbells <i>Fritillaria agrestis</i>	4.2	-	-
Talus fritillary <i>Fritillaria falcata</i>	1B.2	-	-
Serpentine bluecup <i>Githopsis pulchella</i> ssp. <i>serpentinicola</i>	4.3	-	-
Hogwallow starfish <i>Hesperovax caulescens</i>	4.2	-	-
Tehama County western flax <i>Hesperolinon tehamense</i>	1B.3	-	-
Foothill jepsonia <i>Jepsonia heterandra</i>	4.3	-	-

Species	Rare Plant Rank	Federal Status	California Status
Knotted rush <i>Juncus nodosus</i>	2B.3	-	-
Forked hare-leaf <i>Lagophylla dichotoma</i>	1B.1	-	-
Ferris' goldfields <i>Lasthenia ferrisiae</i>	4.2	-	-
Legenere <i>Legenere limosa</i>	1B.1	-	-
Serpentine leptosiphon <i>Leptosiphon ambiguous</i>	4.2	-	-
Mt. Hamilton coreopsis <i>Leptosyne hamiltonii</i>	1B.2	-	-
Spring lessingia <i>Lessingia tenuis</i>	4.3	-	-
Mt. Hamilton lomatium <i>Lomatium observatorium</i>	1B.2	-	-
Showy golden madia <i>Madia radiata</i>	1B.1	-	-
Hall's bush-mallow <i>Malacothamnus hallii</i>	1B.2	-	-
Sylvan microseris <i>Microseris sylvatica</i>	4.2	-	-
Sierra monardella <i>Mondardella candicans</i>	4.3	-	-
Merced monardella <i>Monardella leucocephala</i>	1A	-	-
Lime Ridge navarretia <i>Navarretia gowenii</i>	1B.1	-	-
Colusa grass <i>Neostapfia colusana</i>	1B.1	T	E
California adder's-tongue <i>Ophioglossum californicum</i>	4.2	-	-
San Joaquin Valley Orcutt grass <i>Orcuttia inaequalis</i>	1B.1	T	E
Hairy Orcutt grass <i>Orcuttia pilosa</i>	1B.1	E	E
Mt. Diablo phacelia <i>Phacelia phacelioides</i>	1B.2	-	-
Michael's rein orchid <i>Piperia michaelii</i>	4.2	-	-
Hooked popcorn-flower <i>Plagiobothrys uncinatus</i>	1B.2	-	-
Warty popcorn-flower <i>Plagiobothry verrucosus</i>	2B.1	-	-
Hartweg's golden sunburst <i>Pseudobahia bahiifolia</i>	1B.1	E	E
Delta woolly-marbles <i>Psilocarphus brevissimus</i> var. <i>multiflorus</i>	4.2	-	-

Species	Rare Plant Rank	Federal Status	California Status
Prairie wedge grass <i>Sphenopholis obtusata</i>	2B.2	-	-
Greene's tuctoria <i>Tuctoria greenei</i>	1B.1	E	R

Sources: California Department of Fish and Wildlife 2014b; California Native Plant Society 2014; U.S. Fish and Wildlife Service 2014a.

Rare Plant Rank

1B = plants rare, threatened, or endangered in California and elsewhere.

2B = plants rare, threatened, or endangered in California, but more common elsewhere.

4 = plant of limited distribution.

Federal Status

T = threatened.

E = endangered.

C = candidate.

California Status

E = endangered.

R = rare.

Special-Status Animal Species

The special-status wildlife species that have been identified occurring within Stanislaus County are primarily associated with the annual grasslands/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.

Table 3.4-3. Special-Status Animals Occurring in Stanislaus County

Species	Federal Status	California Status
Invertebrates		
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	E	-
Longhorn fairy shrimp <i>Branchinecta longiantenna</i>	E	-
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T	-
Vernal pool tadpole shrimp <i>Lepidurus packardi</i>	E	-
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T	-
Fish		
Green sturgeon <i>Acipenser medirostris</i>	T	SSC
Steelhead – Central Valley DPS <i>Oncorhynchus clarkii henshawi</i>	T	-
Steelhead – South Central DPS	T	SSC
Central Valley spring-run chinook salmon <i>Oncorhynchus tshawytscha</i>	T	T

Species	Federal Status	California Status
San Joaquin roach <i>Lavinia symmetricus</i> ssp. 1	–	SSC
Hardhead <i>Mylopharodon concephalus</i>	–	SSC
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	–	SSC
Amphibians		
California tiger salamander <i>Ambystoma californiense</i>	T	T
Western spadefoot <i>Spea hammondi</i>	–	SSC
California red-legged frog <i>Rana draytonii</i>	T	SSC
Foothill yellow-legged frog <i>Rana boylei</i>	–	SSC
Reptiles		
Western pond turtle <i>Emys marmorata</i>	–	SSC
Blunt-nosed leopard lizard <i>Gambelia sila</i>	E	E
Coast horned lizard <i>Phrynosoma blainvillii</i>	–	SSC
San Joaquin whipsnake <i>Masticophis flagellum ruddocki</i>	–	SSC
Alameda whipsnake <i>Masticophis lateralis euryxanthus</i>	T	T
Giant garter snake <i>Thamnophis gigas</i>	T	T
Birds		
Bald eagle <i>Haliaeetus leucocephalus</i>	Delisted	E/FP
Swainson's hawk <i>Buteo swainsoni</i>	–	T
Golden eagle <i>Aquila chrysaetos</i>	–	FP
Mountain plover <i>Charadrius montanus</i>	–	SSC
California least tern <i>Sternula antillarum</i>	E	E/FP
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	T	E
Burrowing owl <i>Athene cunicularia</i>	–	SSC
Loggerhead shrike <i>Lanius ludovicianus</i>	–	SSC
Least Bell's vireo <i>Vireo bellii pusillus</i>	E	E

Species	Federal Status	California Status
Yellow breasted chat <i>Icteria virens</i>	–	SSC
Song sparrow (“Modesto” population) <i>Melospiza melodia</i>	–	SSC
Tri-colored blackbird <i>Agelaius tricolor</i>	–	E*
Mammals		
Western red bat <i>Lasiurus blossevillii</i>	–	SSC
Townsend’s big-eared bat <i>Corynorhinus townsendii</i>	–	C (T)
Pallid bat <i>Antrozous pallidus</i>	–	SSC
Western mastiff bat <i>Eumops perotis californicus</i>	–	SSC
Riparian brush rabbit <i>Sylvilagus bachmani riparius</i>	E	E
Fresno kangaroo rat <i>Dipodomys nitratoides exilis</i>	E	E
Riparian woodrat <i>Neotoma fuscipes riparia</i>	E	SSC
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	E	T
American badger <i>Taxidea taxus</i>	–	SSC

Source: California Department of Fish and Wildlife 2014b.

Federal Status

- = no listing.
- C = candidate.
- E = endangered.
- T = threatened.

California Status

- = no listing.
- C = candidate.
- E = endangered.
- E* = tricolored black bird emergency listing effective from December 3, 2014 to June 1, 2015.
- FP = fully protected.
- SSC = species of special concern.
- T = threatened.

Critical Habitat

Critical habitat has been designated for 11 federally listed species within the limits of Stanislaus County (Figure 3.4-2)—Conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, Central Valley steelhead, California tiger salamander, California red-legged frog, succulent owl’s clover, Hoover’s spurge, Colusa grass, hairy Orcutt grass, and Green’s tuctoria. As depicted on Figure 3.4-2, most of this critical habitat occurs along the eastern boundary of the county and is associated with vernal pools. The other large area of critical habitat occurs in mountainous terrain

along the western border of the county and is designated for California red-legged frog. In addition, the San Joaquin, Stanislaus, and Tuolumne rivers are designated critical habitat for Central Valley steelhead.

Wildlife Corridors

Generally, the eastern and western ends of Stanislaus County represent important wildlife movement corridors within the region. The importance of these areas is highlighted in the California Essential Habitat Connectivity (CEHC) Project (Spencer et al. 2010). The CEHC Project was commissioned by the California Department of Transportation and CDFW for the purpose of making transportation and land-use planning more efficient and less costly, while helping reduce dangerous wildlife-vehicle collisions (Spencer et al. 2010). The CEHC Project identified natural blocks of habitat across California and areas that potentially provide linkages between these blocks. The CEHC Project identifies these areas as Essential Connectivity Areas (ECAs). The ECAs were not developed for the purpose of defining areas subject to specific regulations by the CDFW or other agencies. They are identified as lands likely to be important to wildlife movement between large, mostly natural areas at the statewide level. The ECAs form a functional network of wildlands that are considered important to the continued support of California's diverse natural communities. They were not developed for the needs of particular species but were based primarily on the concept of ecological integrity, which considers the degree of land conversion, residential housing impacts, road impacts, and status of forest structure (for forested areas) (Spencer et al. 2010). In addition, consideration was given to the degree of conservation protection and areas known to support high biological values, such as mapped critical habitat and hotspots of species endemism (Spencer et al. 2010). The ECAs are intended as placeholder polygons that can inform land-planning efforts, but they should eventually be replaced by more detailed linkage designs, developed at finer resolution at the regional and ultimately local scale based on the needs of particular species and ecological processes.

The CEHC Project identified extensive natural landscape blocks and ECAs in the area west of I-5 and the area of annual grassland along the low foothills of the Sierra Nevada in the eastern part of the county (Figure 3.4-3). The area of Stanislaus County west of I-5 serves as an important north-south linkage for wildlife in the Inner Coast Range as well as an east-west corridor between this part of the Diablo Range, the Santa Clara Valley, and beyond to the Santa Cruz Mountains. This area is important to the movement of large mammals, such as deer and tule elk (*Cervus elaphus nannodes*), and smaller animals such as American badger, and is also of important for the conservation and recovery of the federally and state threatened San Joaquin kit fox and federally threatened California red-legged frog.

The eastern portion of the county comprises mostly annual grassland that is used for cattle grazing, which is an important area for the conservation and dispersal of vernal pool associated species, including federally protected vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander, and several rare plant species.

Both the Stanislaus and Tuolumne rivers represent important dispersal corridors for aquatic species, including Central Valley steelhead, and also for migratory birds and many common and rare mammal species.

3.4.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan updates; the individual impacts relative to the thresholds of significance; mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and the overall significance of the impact with mitigation incorporated.

Major Sources Used in Analysis

The major sources used in this analysis are listed below.

- California Natural Diversity Database (California Department of Fish and Wildlife 2014b)
- CNPS Inventory of Rare and Endangered Plants (California Native Plant Society 2014)
- USFWS Species List for Stanislaus County (U.S. Fish and Wildlife Service 2014a)
- USGS GAP Analysis Program land cover data (U.S. Geological Survey 1998)
- Central Valley Vernal Pool Complexes (California Department of Fish and Game 2009)
- USFWS Maps of Critical Habitat (U.S. Fish and Wildlife Service 2014b)
- California Essential Habitat Connectivity Project (Spencer et al. 2010)

Approach and Methodology

This EIR analyzes whether the project would have potential to adversely affect existing biological resources. Because the project does not propose any site-specific development activities, this analysis focuses on the potential reasonably foreseeable impacts of future development that could occur as a result of approving the plan updates.

No specific level of future development was forecast during this analysis, because there is no reasonable way to know how many of the uses allowable under the project may be approved in the future, and the locations of such uses cannot be known at this time. However, a comparison was made between baseline conditions presented in Figures 3.4-1, 3.4-2, and 3.4-3 to the General Plan Land Use Designation Map, figures in the Stanislaus County ALUCP, and figures in Chapter 3, Conservation/Open Space Element, of the Stanislaus County General Plan in order to identify general areas where biological resources identified in the setting could be affected by the plan updates.

Thresholds of Significance

Based on State CEQA Guidelines Appendix G and professional judgment, the plan updates would have a significant impact with respect to biological resources if they would result in any of the following.

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.), or waters of the State through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources.
- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.
- Introduce or spread invasive species.

Impacts and Mitigation Measures

Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (less than significant)

The full implementation of the project could result in impacts on special-status species. Build-out pursuant to the general plan could result in the conversion of current land cover types (primarily agriculture) that provide habitat for special-status species and could directly and indirectly affect special-status species, including disruption of normal behavior, injury, and mortality, during and after the development of these areas. The analysis below presents more specific assessment of potential impacts by category (special-status plants, special-status fish, and special-status wildlife). The General Plan update's goal for consistency with the ALUCP would result in the limitation of new residential development in certain areas due to their presence within the Airport Influence Areas (AIA). The proposed ALUCP would also limit the creation of conservation areas within AIAs. Because that would not change existing conditions (such conservation areas do not currently exist), the limitation would not have a significant impact. More detail about impacts on special-status species is provided below.

Special-Status Plants

Special-status plants and their potential habitat could be removed or disturbed with future development under the general plan's land use designations. Areas planned for future development around East Oakdale, Del Rio, Salida, and the planned highway commercial development at I-5 and Howard Road could result in the loss of or disturbance to vegetation communities that could support special-status plants, including annual grassland, vernal pool complexes, valley foothill riparian, and oak woodland. These communities provide habitat for nine state and/or federally listed special-status plant species—succulent (fleshy) owl's clover, Hoover's spurge, Colusa grass, San Joaquin Valley Orcutt grass, hairy Orcutt grass, and Greene's tuctoria in vernal pools; Delta button-celery in riparian habitat; Tracy's eriastrum in oak woodland and blue oak-foothill pine; and Hartweg's golden sunburst in annual grassland and oak woodland—as well as numerous other

California Rare Plant Rank species that are not listed. Development activities and future use of these areas could result in the loss or disturbance of habitat and direct removal of special-status plants.

The following goals and policies would help minimize, avoid, and compensate for project impacts on special-status plants.

Land Use Element

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY FOUR. Urban development shall be discouraged in areas with growth-limiting factors such as high water table or poor soil percolation, and prohibited in geological fault and hazard areas, flood plains, riparian areas, and airport and private airstrip hazard areas unless measures to mitigate the problems are included as part of the application.

POLICY SEVEN. Riparian habitat along the rivers and natural waterways of Stanislaus County shall to the extent possible be protected.

Conservation/Open Space Element

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

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.
2. Review zoning regulations and landscaping requirements for compatibility between proposed development and natural areas, including protection from invasive plants.
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.
4. Discourage the establishment of conservation areas or nature preserves within adopted Airport Influence Areas.

Goal One, Policy Two in the updated Conservation/Open Space Element assures compatibility between natural areas and development but also includes Implementation Measure 4, which discourages the establishment of conservation areas or nature preserves within the AIAs identified in the ALUCP. This policy could prevent the future protection and restoration of riparian habitat along the Tuolumne River that falls within the Modesto Airport AIA. This could prevent the protection of potential habitat for special-status plants that occur in riparian habitat.

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.

POLICY FOUR. Protect and enhance oak woodlands and other native hardwood habitat.

GOAL TWO. Conserve water resources and protect water quality in the County.

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

GOAL TEN. Protect fish and wildlife species of the County.

POLICY 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

1. 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.
2. 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.~~

Implementation of these goals and policies would reduce the effects of the general plan updated land use designation, updated polices, and the ALUCP and ensure that impacts will be less than significant.

Special-Status Fish

Special-status fish could be affected by future development under the general plan's land use designations along the Stanislaus River in East Oakdale, Del Rio, and Salida; and along Tuolumne River in Modesto. These rivers are designated critical habitat for Central Valley steelhead.

As presented in *Special-Status Plants*, Goal One, Policy Two in the Conservation/Open Space Element assures compatibility between natural areas and development. Implementation Measure 4 of this updated policy discourages the establishment of conservation areas or nature preserves within the AIAs identified in the ALUCP. This policy could prevent the future protection of habitat along the Tuolumne River that falls within the Modesto Airport AIA, which has been identified as critical habitat for Central Valley steelhead, but may not necessarily preclude any restoration activities within the river itself.

Special-Status Wildlife

Habitat for special-status wildlife could be lost or disturbed with future development under the general plan update's land use designations. Areas planned for future development around East Oakdale, Del Rio, Salida, and the planned highway commercial development at I-5 and Howard Road could result in the loss or disturbance of natural habitats, including annual grassland, vernal pool complexes, valley foothill riparian, and blue oak woodland. These natural communities provide habitat for several special-status wildlife species, including Conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, California tiger salamander, Swainson's hawk, and San Joaquin kit fox. Development activities and future use of these areas could result in the loss or disturbance of habitat, injury and mortality to special-status species, and disruption of normal behaviors that could reduce reproductive output and overall survivorship.

As presented in *Special-Status Plants*, Goal One, Policy Two in the Conservation/Open Space Element assures compatibility between natural areas and development but also includes the new Implementation Measure 4, which discourages the establishment of conservation areas or nature

preserves within the AIAs identified in the ALUCP. This policy could prevent the future protection and restoration of habitat along the Tuolumne River that falls within the Modesto Airport AIA. This could prevent the protection of habitat for the federally threatened valley elderberry longhorn beetle, which has been documented along the river.

The following goals and policies would help minimize, avoid, and compensate for project impacts on special-status fish and wildlife species.

Land Use Element

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY FOUR. Urban development shall be discouraged in areas with growth-limiting factors such as high water table or poor soil percolation, and prohibited in geological fault and hazard areas, flood plains, riparian areas, and airport and private airstrip hazard areas unless measures to mitigate the problems are included as part of the application.

POLICY SEVEN. Riparian habitat along the rivers and natural waterways of Stanislaus County shall to the extent possible be protected.

Conservation/Open Space Element

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

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.
2. Review zoning regulations and landscaping requirements for compatibility between proposed development and natural areas, including protection from invasive plants.
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.
4. Discourage the establishment of conservation areas or nature preserves within adopted Airport Influence Areas.

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

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.
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.

POLICY FOUR. Protect and enhance oak woodlands and other native hardwood habitat.

GOAL TWO. Conserve water resources and protect water quality in the County.

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

GOAL TEN. Protect fish and wildlife species of the County.

POLICY 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

1. 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.
2. 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.~~

Implementation of these goals and policies would reduce the effects of the general plan updated land use designation, updated policies, and the ALUCP. This impact would be less than significant considering the Plan's aforementioned goals and policies.

Significance without Mitigation: Less than significant (no mitigation required)

Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (less than significant)

Sensitive natural communities could be affected by the project, including valley foothill riparian types (Great Valley cottonwood riparian forest, Great Valley mixed riparian forest, Great Valley oak riparian forest, and sycamore alluvial woodland) and oak woodland. Vernal pools (northern hardpan vernal pool), freshwater emergent wetlands, and other waters could also be affected, but are addressed under Impact BIO-3. Other sensitive natural communities in the county, including blue oak-foothill pine woodland and chaparral occur outside of areas that would be affected by development under the project.

Under the general plan update's land use designations, valley foothill riparian habitat and oak woodland could be lost or disturbed with future development. Areas planned for future development around East Oakdale, Del Rio, and Salida could result in the loss or disturbance of valley foothill riparian along the Stanislaus River.

Conservation/Open Space Element Goal One, Policy Two assures compatibility between natural areas and development but also includes the new Implementation Measure 4, which discourages the establishment of conservation areas or nature preserves within the AIAs identified in the ALUCP. This policy could prevent the future protection and restoration of riparian habitat along the Tuolumne River that falls within the Modesto Airport AIA.

The general plan update includes several goals and policies that emphasize the conservation and management of sensitive natural communities. The following policies would help minimize, avoid, and compensate for project impacts on sensitive natural communities.

Land Use Element

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY FOUR. Urban development shall be discouraged in areas with growth-limiting factors such as high water table or poor soil percolation, and prohibited in geological fault and hazard areas, flood plains, riparian areas, and airport and private airstrip hazard areas unless measures to mitigate the problems are included as part of the application.

POLICY SEVEN. Riparian habitat along the rivers and natural waterways of Stanislaus County shall to the extent possible be protected.

Conservation/Open Space Element

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.

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.
2. Review zoning regulations and landscaping requirements for compatibility between proposed development and natural areas, including protection from invasive plants.
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.
4. Discourage the establishment of conservation areas or nature preserves within adopted Airport Influence Areas.

POLICY FOUR. Protect and enhance oak woodlands and other native hardwood habitat.

GOAL TWO. Conserve water resources and protect water quality in the County.

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

GOAL TEN. Protect fish and wildlife species of the County.

POLICY 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

1. 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.
2. 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.~~

The effects of the project on sensitive natural communities would be reduced to less than significant through the implementation of the above policies.

Significance without Mitigation: Less than significant (no mitigation required)

Impact BIO-3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) or waters of the State through direct removal, filling, hydrological interruption, or other means (less than significant)

Wetlands could be filled or disturbed as a result of future development under the general plan update's land use designations. Areas planned for future development around East Oakdale, Del Rio, and Salida could result in effects on any wetlands and waters associated with the Stanislaus River. However, these are generally areas which have been historically farmed or have significant surrounding development and wetlands, if any, would be of limited size. East Oakdale would have the best potential for wetlands, however the remaining area for development is limited and that would limit potential impacts. Development activities could result in the fill of wetlands and the degradation of wetlands and waters over time due to sedimentation, alteration of hydrology, and effects on water quality.

Goal One, Policy Two in the Conservation/Open Space Element assures compatibility between natural areas and development but also includes the new Implementation Measure 4, which discourages the establishment of conservation areas or nature preserves within the AIAs identified in the ALUCP. This policy could prevent the future protection and restoration of wetland and aquatic habitat along the Tuolumne River that falls within the Modesto Airport AIA.

Also, Goal Nine, Policies Twenty-Six and Twenty-Seven in the updated Conservation/Open Space Element support the development of sand and gravel mines in several ARAs of the county, which could affect wetlands and other waters, including vernal pool/annual grassland complex, freshwater emergent wetland, riverine, and lacustrine cover types. Mining activities could result in the fill and the degradation of wetlands and waters over time due to sedimentation, alteration of hydrology, and effects on water quality. Wetlands and other waters potentially subject to these impacts occur in the Orestimba Creek Fan ARA, Garzas Creek Fan ARA, Calaveras River Terrace ARA, Stanislaus River ARA, and Tuolumne River ARA.

The general plan update includes several goals and policies that would support the protection of wetlands and waters. The following policies would help minimize, avoid, and compensate for project impacts on wetlands and waters.

Land Use Element

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY FOUR. Urban development shall be discouraged in areas with growth-limiting factors such as high water table or poor soil percolation, and prohibited in geological fault and hazard areas, flood plains, riparian areas, and airport and private airstrip hazard areas unless measures to mitigate the problems are included as part of the application.

POLICY SEVEN. Riparian habitat along the rivers and natural waterways of Stanislaus County shall to the extent possible be protected.

Conservation/Open Space Element

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.

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.
2. Review zoning regulations and landscaping requirements for compatibility between proposed development and natural areas, including protection from invasive plants.
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.
4. Discourage the establishment of conservation areas or nature preserves within adopted Airport Influence Areas.

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.

GOAL TWO. Conserve water resources and protect water quality in the County.

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.

The effects of the project on wetlands and other waters as defined by Section 404 of the Clean Water Act and regulated by the state would be reduced to less than significant through the implementation of the policies mentioned above.

Significance without Mitigation: Less than significant (no mitigation required)

Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (significant and unavoidable)

Movement corridors for fish and wildlife could be affected by future development under the general plan update's land use designations. Areas planned for future development around East Oakdale, Del Rio, Salida, and the planned highway commercial development at I-5 and Howard Road could interfere with the movement of fish and wildlife through the encroachment upon the Stanislaus River (East Oakdale, Del Rio, and Salida) and with the movement of wildlife, in particular San Joaquin kit fox, west of I-5 (highway commercial development).

The general plan update includes several goals and policies that emphasize the conservation and management of natural resources and the preservation of open space lands. The following policies would help minimize, avoid, and compensate for project impacts on movement corridors for fish and wildlife.

Land Use Element

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY FOUR. Urban development shall be discouraged in areas with growth-limiting factors such as high water table or poor soil percolation, and prohibited in geological fault and hazard areas, flood plains, riparian areas, and airport and private airstrip hazard areas unless measures to mitigate the problems are included as part of the application.

POLICY SEVEN. Riparian habitat along the rivers and natural waterways of Stanislaus County shall to the extent possible be protected.

Conservation/Open Space Element

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

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.
2. Review zoning regulations and landscaping requirements for compatibility between proposed development and natural areas, including protection from invasive plants.
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.
4. Discourage the establishment of conservation areas or nature preserves within adopted Airport Influence Areas.

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.

POLICY FOUR. Protect and enhance oak woodlands and other native hardwood habitat.

GOAL TWO. Conserve water resources and protect water quality in the County.

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

GOAL TEN. Protect fish and wildlife species of the County.

POLICY 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

1. 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.
2. 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.~~

The potential for additional development in the county's rural communities is relatively limited. Nonetheless, the effects of the project on wildlife movement corridors, in particular the effects on the Stanislaus and Tuolumne rivers, would substantially impede the movement of fish and wildlife through the County. Considering the past loss of riparian habitat and the proximity of development and agricultural lands to these rivers, and the already narrow movement corridor west of I-5, the impacts from the project on wildlife movement corridors would be significant and unavoidable. There is no feasible mitigation available to reduce this impact.

Significance: Significant and Unavoidable (no mitigation available)

Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources (no impact)

The applicable local policies and ordinance protecting biological resources consist of those adopted by the County. The project would not conflict with any county policies or ordinances protecting biological resources.

Significance without Mitigation: No impact (no mitigation required)

Impact BIO-6: Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan (no impact)

No natural community conservation plans have been adopted in Stanislaus County. (California Department of Fish and Wildlife 2014c) There are no adopted habitat conservation plans within Stanislaus County. The project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

Significance without Mitigation: No impact

Impact BIO-6: Introduce or spread invasive species (less than significant)

Invasive plants are present in the county. However, development activities could introduce new invasive plants or contribute to the spread of existing invasive plants to uninfested areas outside the county. Invasive plants or their seeds may be dispersed by construction equipment if appropriate prevention measures are not implemented. The introduction or spread of invasive plants as a result of the project could have a significant effect on sensitive natural communities within and outside the project area by displacing native flora.

Introduction or spread of invasive plant species is of concern to CDFW. The following changes to the Conservation/Open Space Element will ensure that this impact is less than significant.

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

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.

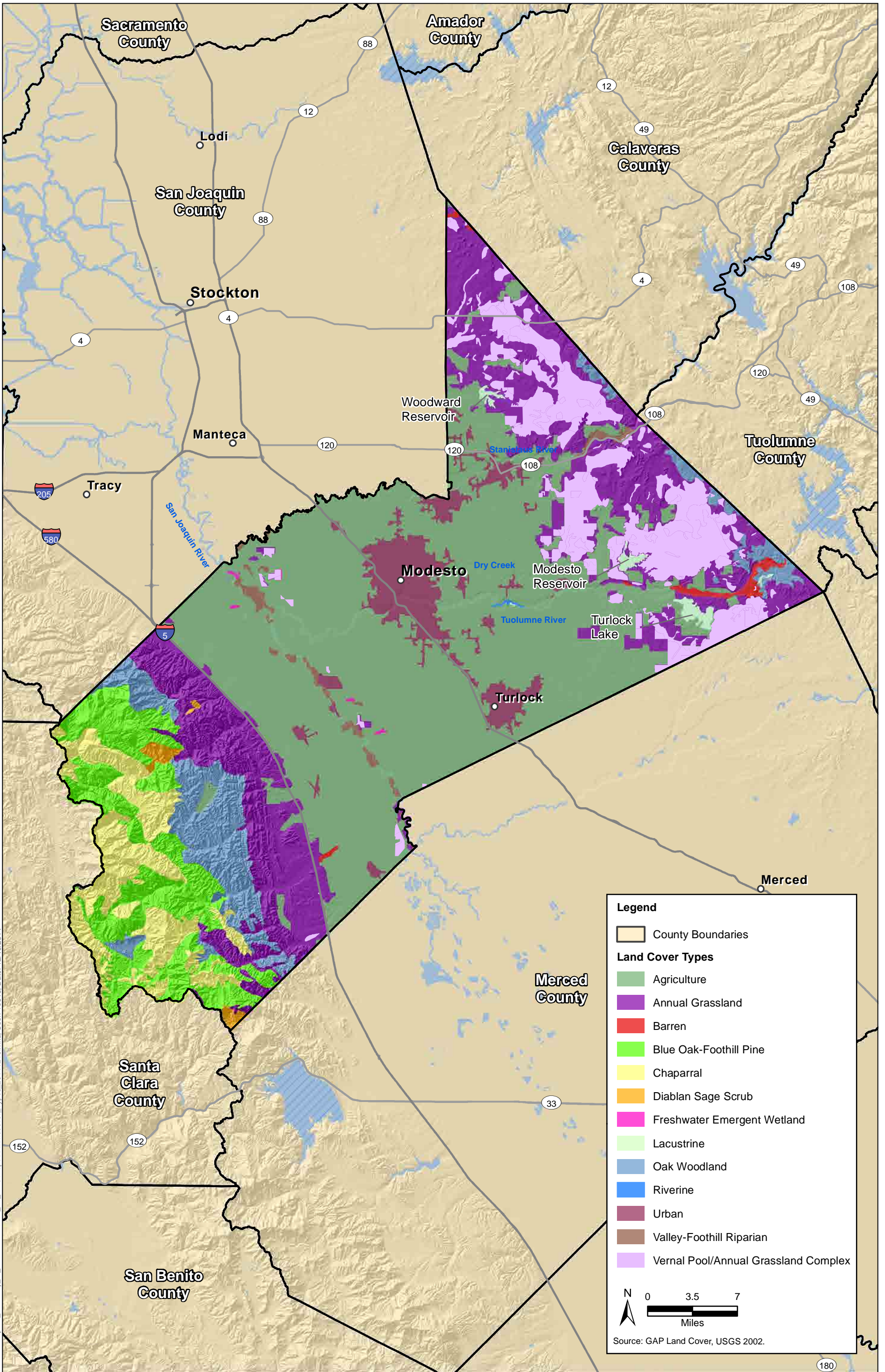
Significance without Mitigation: Less than Significant (no mitigation required)

3.4.4 References Cited

Printed References

- Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken (eds.). 2012. *The Jepson Manual: Vascular Plants of California*. Second Edition, revised. Berkeley: University of California Press.
- California Consortium of Herbaria. 2014. Search for Stanislaus County specimens. Updated: December 10, 2014. Available: http://ucjeps.berkeley.edu/cgi-bin/get_consort.pl. Accessed: December 10, 2014.
- California Department of Fish and Game. 2009. *Central Valley Vernal Pool Complexes* (Holland).
- . 1998. No Net Loss? Changes in Great Valley Vernal Pool Distribution from 1989 to 1997. Prepared by Robert F. Holland, Ph.D. for the California Department of Fish and Game, Natural Heritage Division. Sacramento, CA.
- California Department of Fish and Wildlife. 2014a. *Special Vascular Plants, Bryophytes, and Lichens List*. October 2014. Available: <http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPPlants.pdf>. Accessed: December 23, 2014.
- . 2014b. California Natural Diversity Database, RareFind 5, Version 5, November 30, 2014 update. Records search for Stanislaus County. Sacramento, CA. Available: <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>. Accessed: December 10, 2014.
- . 2014c. Natural Communities Conservation Planning, California Regional Conservation Plans Map, March 2014 update. Available: <https://www.wildlife.ca.gov/Conservation/Planning/NCCP>. Accessed: January 7, 2015.
- California Department of Water Resources. 1995. *Los Banos Grandes Facilities Sycamore Pilot Program Report Number IV*. Memorandum to State Water Project Planning Branch. December 7, 1995.
- California Invasive Plant Council. 2006. *California Invasive Plant Inventory*. February. (Cal-IPC Publication 2006-02.) Berkeley, CA. Available: <http://www.cal-ipc.org/ip/inventory/pdf/Inventory2006.pdf>. Accessed: December 10, 2014.

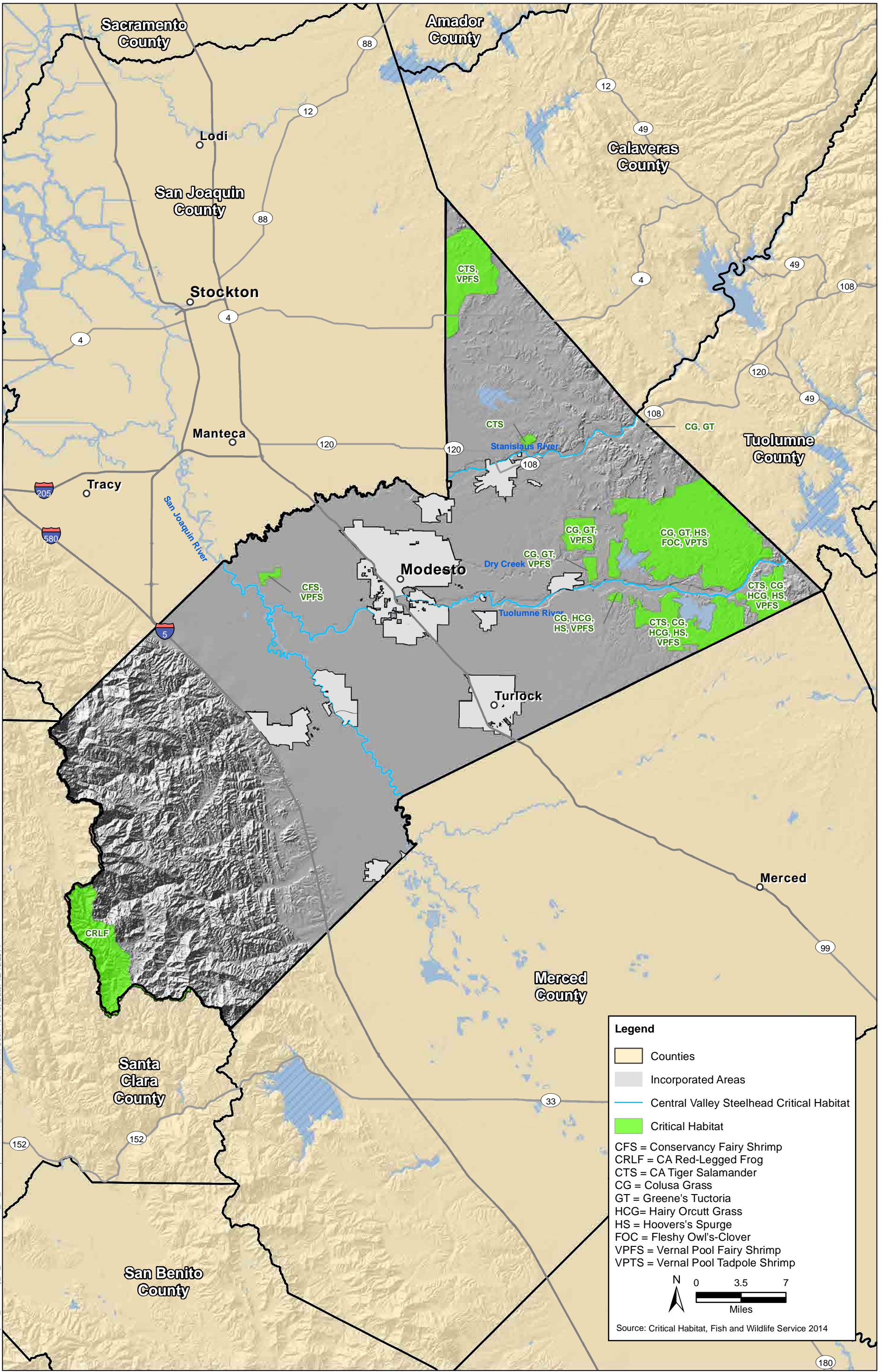
- California Native Plant Society. 2014. *Inventory of Rare and Endangered Plants* (online edition, v7-14nov). Records search of Stanislaus County. Last revised: November 14, 2014. Available: <http://cnps.site.aplus.net/cgi-bin/inv/inventory.cgi>. Accessed: December 10, 2014.
- Cypher, B. L., S. E. Philips, and P. A. Kelly P. A. 2013. Quantity and Distribution of Suitable Habitat for Endangered San Joaquin Kit Foxes: Conservation Implications. *Canid Biology and Conservation* 16(7):25–31.
- Holland, R. F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. California Department of Fish and Game, Nongame-Heritage Program, Sacramento, CA. October 1986.
- Mayer, K. E., and W. F. Laudenslayer, Jr. (eds.). 1988. *A Guide to Wildlife Habitats of California*. State of California, Resources Agency, Department of Fish and Game Sacramento, CA. Available: https://www.dfg.ca.gov/biogeodata/cwhr/wildlife_habitats.asp. Accessed: December 10, 2014.
- Spencer, W. D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler, A. 2010. *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California*. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.
- U.S. Department of Agriculture. 2014. *Introduced, Invasive, and Noxious Plants*. Available: <http://plants.usda.gov/java/noxious?rptType=State&statefips=06>. Accessed: December 23, 2014.
- U.S. Fish and Wildlife Service. 2014a. *Sacramento Fish and Wildlife Office Species List*. Available: http://fws.gov/sacramento/ES_Species/Lists/es_species_lists.cfm. Accessed: December 10, 2014.
- . 2014b. *Critical Habitat Maps: GIS files* Available: <http://crithab.fws.gov/crithab/> Dated: September 25, 2014.
- . 2013. *Eagle Conservation Plan Guidance*. Available: http://www.fws.gov/windenergy/eagle_guidance.html. Accessed: December 10, 2014.
- University of California, Santa Barbara. 2002. *Land-cover for California* (Updated). California Gap Analysis, Biogeography Lab, University of California, Santa Barbara, Santa Barbara California. Updated May 6, 2002.



Path: K:\Projects_1\County_of_Stanislaus\00203_10_DAC\mapdoc\Landcover_Types_20141216.mxd; User: 19016; Date: 12/19/2014



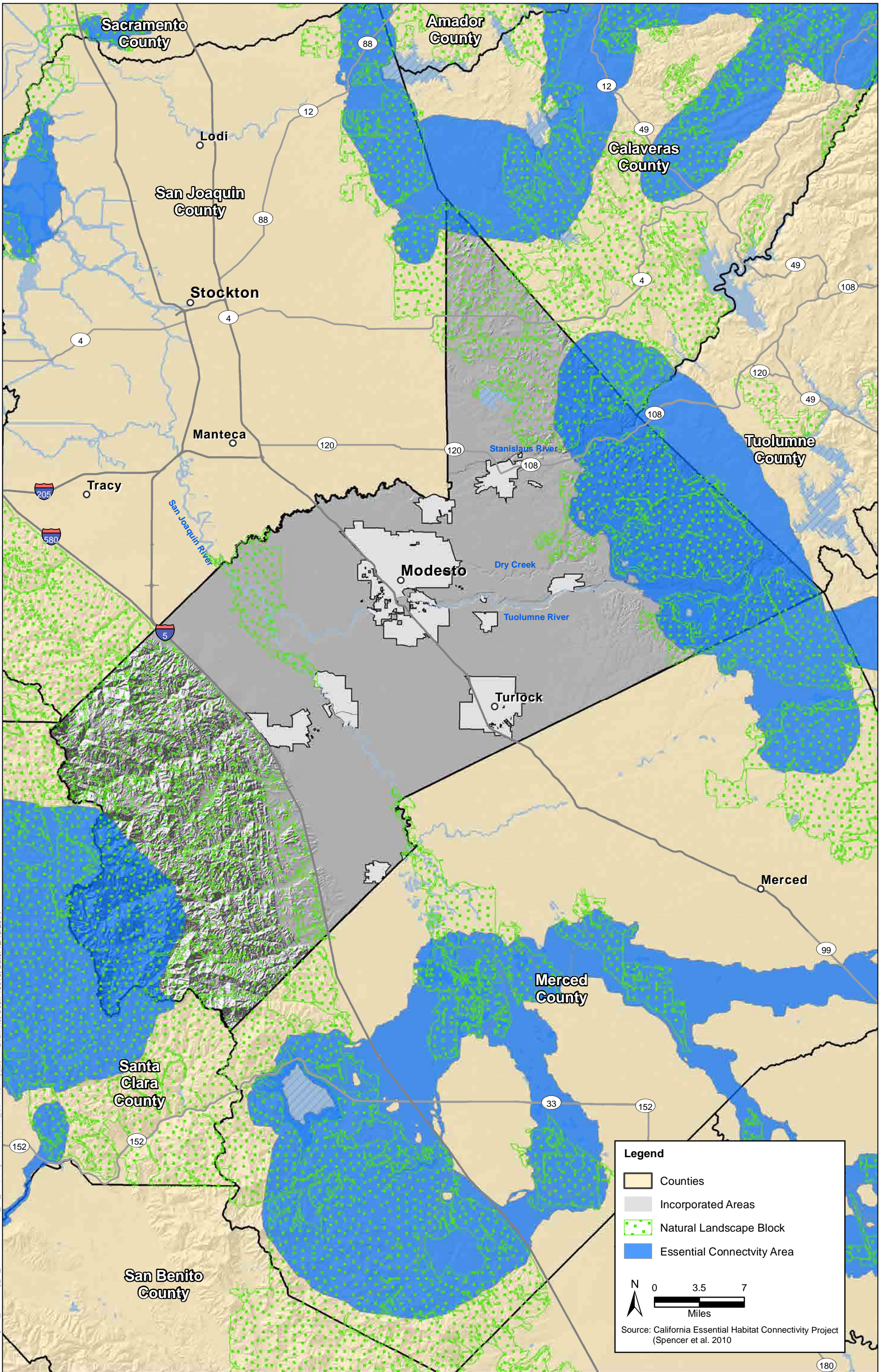
Figure 3.4-1
Land Cover in Stanislaus County



Path: K:\Projects_1\County_of_Stanislaus\00203_10_DAC\mapdoc\Critical_Hab_20141216.mxd; User: 19016; Date: 12/18/2014



Figure 3.4-2
Critical Habitat in Stanislaus County



Path: K:\Projects_1\County_of_Stanslaus\00203_10_DAC\mapdoc\Essential_Connectivity_20141216.mxd; User: 19016; Date: 12/19/2014



Figure 3.4-3
Wildlife Movement Corridors

3.5 Cultural Resources

3.5.1 Introduction

This section discusses the impacts of the plan updates with respect to cultural resources. It lists the thresholds of significance that form the basis of the environmental analysis, describes the cultural resources study area and major sources used in the analysis, provides environmental setting information that is relevant to cultural resources, and assesses whether the plan updates would result in significant impacts with respect to this resource. The discussion of impacts on paleontological resources is found in Section 3.6, *Geology, Soils, and Paleontological Resources* because those resources are linked to geologic formations and are not cultural remains.

Study Area

The cultural resources study area for the EIR is defined as unincorporated Stanislaus County.

3.5.2 Environmental Setting

This section describes the federal, state, and local regulations and policies that are applicable to the plan updates, and the existing conditions pertaining to cultural resources in the study area. The existing conditions will constitute the baseline for this analysis.

Regulatory Setting

This section describes the federal, state, and local regulations related to cultural resources that would apply to the plan updates.

A cultural resource may be designated as significant by national, state, or local authorities. For a resource to qualify for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR), it must meet one or more established criteria.

Federal

National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) requires that, before beginning any undertaking, a federal agency must take into account the effects of the undertaking on historic properties and offer the Advisory Council on Historic Preservation and other interested parties an opportunity to comment on these actions. The NHPA applies to federal actions and is most commonly invoked at the local level when a development project is subject to federal permits. It is also invoked when local projects, such as road projects, receive federal funds. Specific regulations regarding compliance with Section 106 state that, although the tasks necessary to comply with Section 106 may be delegated to others, the federal agency is ultimately responsible for ensuring that the Section 106 process is completed.

The Section 106 review process involves a five-step procedure.

1. Initiate the Section 106 process (assess the ability of the undertaking to affect historic properties, identify consulting parties, and plan to involve interested parties).
2. Identify historic properties in the area of potential effect.
3. Assess adverse effects.
4. Resolve adverse effects.
5. Implement the project according to the memorandum of agreement, or implement the project without a memorandum of agreement if one is unnecessary.

Section 106 requires federal agencies or those they fund or permit to consider the effects of their actions on properties that are determined eligible for listing or are listed in the NRHP. To determine whether an undertaking could affect NRHP-eligible properties, cultural resources (including archaeological, historical, architectural, and traditional cultural properties) must be inventoried and evaluated for the NRHP.

To be listed in the NRHP, a property must be at least 50 years old (or be of exceptional historic significance if less than 50 years old) and meet one or more of the NRHP criteria. To qualify for listing, a historic property must represent a significant theme or pattern in history, architecture, archaeology, engineering, or culture at the local, state, or national level. It must meet one or more of the four criteria listed below and have sufficient integrity to convey its historic significance. The criteria for evaluating the eligibility of a historic property for listing in the NRHP are defined in Code of Federal Regulations [CFR], Title 36, Section 60.4 as follows.

- Criterion A – Association with events that have made a significant contribution to the broad patterns of our history.
- Criterion B – Association with the lives of persons significant to our past.
- Criterion C – Resources that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.
- Criterion D – Resources that have yielded, or may be likely to yield, information important to history or prehistory.

In addition to meeting the significance criteria, a significant historic property must possess integrity to be considered eligible for listing in the NRHP. Integrity refers to a property's ability to convey its historic significance. Integrity is a quality that applies to historical resources in seven specific ways: location, design, setting, materials, workmanship, feeling, and association. To be considered a significant historic property, a resource must possess two, and usually has more, of these kinds of integrity, depending on the context and the reasons why the property is significant. National Park Service's *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation* (National Park Service 1995), discusses the types of integrity.

- **Location** – the place where the historic property was constructed or the place where the historic event took place.
- **Design** – the combination of elements that create the form, plan, space, structure, and style of a property.
- **Setting** – the physical environment of a historic property.

- **Materials** – the physical environments where combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- **Workmanship** – the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- **Feeling** – a property’s expression of the aesthetic or historic sense of a particular period of time.
- **Association** – the direct link between an important historic event or person and a historic property.

The NRHP criteria also limit the consideration of moved properties because significance is embodied in locations and settings. Under the NRHP, moving a building destroys the integrity of location and setting. A moved property can be eligible for listing if it is significant primarily for architectural value or if it is the surviving property most importantly associated with a historic person or event (National Park Service 1995).

Section 106 regulations define an adverse effect as an effect that alters, directly or indirectly, the qualities that make a resource eligible for listing in the NRHP (36 CFR 800.5[a][1]). Consideration must be given to the property’s location, design, setting, materials, workmanship, feeling, and association, to the extent that these qualities contribute to the integrity and significance of the resource. Adverse effects may be direct and reasonably foreseeable, or may be more remote in time or distance (36 CFR 8010.5[a][1]). Examples of adverse effects are listed below.

- Physical destruction of or damage to all or part of the property.
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary’s Standards for the Treatment of Historic Properties (Weeks and Grimmer 1995) and applicable guidelines.
- Removal of the property from its historic location.
- Change of the character of the property’s use or of physical features within the property’s setting that contribute to its historic significance.
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property’s significant historic features.
- Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to a Native American tribe or Native Hawaiian organization.
- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property’s historic significance.

State

California Environmental Quality Act

CEQA uses the term *historical resources* to describe buildings, sites, structures, objects, or districts that may have historical, pre-historical, architectural, archaeological, cultural, or scientific importance. CEQA states that “[a] project that may cause a substantial adverse change in the

significance of an historical resource is a project that may have a significant effect on the environment.” (Public Resources Code [PRC] Section 21084.1)

If implementation of a project could result in significant effects on historical resources, then alternative plans or mitigation measures that reduce the effects to a less-than-significant level must be incorporated into the project (California Code of Regulations (CCR), Title 14, Sections 15064.5, 15126.4). The first step in the analysis of a project’s potential impacts on historical resources is to determine whether any significant historical resources are present. The State CEQA Guidelines define three ways that a property will qualify as a historical resource for the purposes of CEQA review.

1. The resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR).
2. The resource is included in a local register of historical resources, as defined in Section 5020.1[k] of the Public Resources Code (PRC) or identified as significant in a historical resource survey meeting the requirements of Section 5024.1[g] of the PRC, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. The lead agency determines the resource to be significant, as supported by substantial evidence in light of the whole record (14 CCR 15064.5[a]).

Each of these is related to the eligibility criteria for inclusion in the CRHR (PRC Sections 5020.1[k], 5024.1, 5024.1[g]). A historical resource may be eligible for inclusion in the CRHR if it meets any of the following conditions (14 CCR 4850).

1. It is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
2. It is associated with the lives of persons important to local, California, or national history.
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values.
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Properties that are listed in or eligible for listing in the NRHP are considered eligible for listing in the CRHR and thus are also significant historical resources for the purpose of CEQA (PRC Section 5024.1[d][1]).

Under CEQA, a substantial adverse change in the significance of a resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired. Actions that would materially impair the significance of a historic resource are any actions that would demolish or adversely alter the physical characteristics that convey the property’s historical significance and qualify it for inclusion in the CRHR, the NRHP, or in a local register or survey that meets the requirements of PRC Sections 5020.1[k] and 5024.1[g].

Policies Concerning Native American Heritage

PRC Section 5097.9 states that no public agency or a private party on public property “shall...interfere with the free expression or exercise of Native American religion...” The code

further states that “nor shall any such agency or party cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except on a clear and convincing showing that the public interest and necessity so require.”

County and city lands are exempt from this provision, except for parklands larger than 100 acres.

Policies Concerning Human Remains

Disturbance of human remains without the authority of law is a felony (California Health and Safety Code Section 7052). If the remains are Native American in origin, they are within the jurisdiction of the Native American Heritage Commission (NAHC) (California Health and Safety Code Section 7050.5c; PRC Section 5097.98).

If human remains are discovered or recognized in any location other than a dedicated cemetery, there can be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the following take place.

- The County Coroner has been informed and has determined that no investigation of the cause of death is required; and
- The Coroner makes a determination that the remains are Native American or has reason to believe they are Native American, in which case the Coroner must contact NAHC, and
- NAHC determines the most likely descendant; and
 - The most likely descendants of the deceased Native American(s) have made a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code, Section 5097.98, or
 - The NAHC was unable to identify a most likely descendant, or
 - The most likely descendent failed to make a recommendation within 24 hours after being notified by the NAHC. (California Health and Safety Code Section 7050.5c; PRC Section 5097.98).

Senate Bill 18 (Chapter 905, Statutes of 2004) – Local and Tribal Intergovernmental Consultation

Senate Bill (SB) 18 is a process separate from CEQA that requires cities and counties that include traditional tribal cultural places on both public and private lands to consult with federally and non-federally recognized Native American tribes prior to approving amendments to their general plans. A cultural place is a landscape feature, site, or cultural resource that has some relationship to particular tribal religious heritage, or is a historic or archaeological site of significance or potential significance.

SB 18 places the responsibility of initiating consultation on Stanislaus County by notifying tribal representatives of the proposed general plan amendment and giving the tribes at least 90 days to accept the offer of consultation. The purpose of SB 18 is to provide time for tribal input early in the planning process so that the general plan amendment can incorporate features that would protect tribal cultural places. Consultation is a “government to government” interaction between tribal representatives and representatives of the County. The NAHC maintains a list of Native American individual/groups, organized by county, for SB 18 Tribal Consultation.

Assembly Bill 52 (Chapter 532, Statutes of 2014) – Native American Consultation Under CEQA

Assembly Bill (AB) 52, effective July 1, 2015, establishes new requirements under CEQA for lead agencies to offer Native American tribes the opportunity to formally consult over proposed projects prior to the release of draft environmental documents for public review. The consultation is to cover potential impacts, mitigation measures, and project alternatives that may reduce or avoid impacts. No EIR or negative declaration can be approved unless no tribe requested consultation, the consultation resulted in mutually agreeable mitigation or alternatives, or the lead agency concluded the consultation without an agreement but after a good faith attempt at consultation. AB 52 also expands CEQA's concerns to include the potential for significant adverse effects on tribal cultural resources, as defined in the new statute.

Local

Stanislaus County General Plan Goals and Policies

The Conservation/Open Space Element of the Stanislaus County General Plan has established goals to "preserve areas of national, state, regional, and local historical importance," and to preserve "'Qualified Historical Buildings' as defined by the State Building Code" (Conservation/Open Space Element, Goal Eight, Policies Twenty-Four and Twenty-Five). Except for compliance with CEQA, the only implementation measure for the policy goals that may be relevant to this general plan update is the requirement to seek input from the Knight's Ferry Municipal Advisory Council concerning any development proposals in the historical site zone encompassing Knight's Ferry.

The following County general plan goal, policies, and implementation measures apply to cultural resources.

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 historical and archeological 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.
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.
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.
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 NHPA.
5. The County shall utilize the California Environmental Quality Act (CEQA) process to protect archaeological or historic resources. Most discretionary projects require review for compliance with CEQA. As part of this review, potential impacts must be identified and mitigated.

6. The County shall make referrals to the Office of Historic Preservation and the CCIC as required to meet CEQA requirements.
7. The County will work with all interested individuals and organizations to protect and preserve the mining heritage of Stanislaus County.

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 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.
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.

City Ordinances and Policies

City ordinances and policies do not apply to unincorporated lands under the jurisdiction of Stanislaus County. The following summaries describe the means by which cities protect historical resources within the incorporated areas of the county.

City of Modesto

Modesto has a landmark preservation ordinance that establishes the recognition, preservation, enhancement, perpetuation, and use of structures, natural features, sites, and areas within the city as having historic, architectural, archaeological, structural engineering, or aesthetic significance. The eligibility of a site is determined through a recommendation by the Modesto Landmark Preservation Commission, followed by a public hearing and final determination by the City Council. Accordingly, Modesto has a list of local sites beyond those in the CRHR and NRHP.

When a project proposes to alter a building older than 45 years, or when construction would occur within 100 feet of such a building, data sufficient to indicate the historical significance of the building must be submitted to the City. If a resource is found to be historically significant locally, the City requires the implementation of measures to preserve that resource. If archaeological resources are discovered during construction, all activity must cease in the area until a qualified archaeologist has evaluated the find according to State CEQA Guidelines.

City of Turlock

The Cultural and Historic Resources section of the City’s General Plan Conservation Element states the following guiding policy: “Integrate historic preservation into planning for Downtown and other areas with historic significance.” Implementing policies recommend following state requirements for a certified local government and utilizing the historic building code to encourage the adaptive reuse of historic buildings. (City of Turlock 2012.)

City of Hughson

The Open Space and Conservation Element of the Hughson General Plan includes a cultural resource conservation policy: “The City will support the efforts of the Hughson Historical Society to document and preserve the community’s history and create a museum to highlight Hughson’s past.” It also commits the city to undertake cultural resources analyses as part of the CEQA process.” (City of Hughson 2005.)

City of Oakdale

The Oakdale General Plan contains policies related to its historic neighborhoods and historical preservation including Policies LU-2.5 (“Preserve and enhance the integrity, cohesiveness, and character of Oakdale’s historic neighborhoods including the street grid pattern, architectural styles, tree canopies, public improvements and amenities”), LU-3.7 (“Preserve and enhance buildings of historic and architectural importance, and ensure that new development is compatible with and contributes to the historic identity of Downtown.”), and NR-7 (“Encourage the preservation and adaptive reuse of historic sites and structures.”). Generally, the Land Use and Natural Resources Elements of the general plan outlines goals to preserve the older portions of the city as a basis of its heritage. Policies include instructions to conduct cultural resources surveys before approving development plans and to consider establishing “flexible zoning regulations to encourage preservation of structures and architectural styles.”

Oakdale does not have a specific historic preservation ordinance. However, there is a historic-cultural overlay district that encompasses the central business district and surrounding residential areas. Any action requiring a City permit for work within the district requires design review by the appointed committee. (City of Oakdale 2013.)

City of Newman

The Newman 2030 General Plan’s Recreation and Cultural Resources Element lists specific policies to achieve the goal of preserving historic resources, including for example RCR-5.1 (“The City shall exercise its responsibility to identify, document and evaluate Newman’s historic resources that may be affected by proposed development projects and other landscape-altering activities.”) and RCR-5.2 (“The City shall set as a high priority the protection and enhancement of Newman’s historically and architecturally-significant buildings”). Those policies include instructions to update the city’s inventory of historic buildings and sites; adopt the state Historical Building Code; and to create historic districts with standards for preservation and development.

The City has a historic preservation overlay district for which all new building permits must undergo design review by an architectural review committee. This process applies to commercial and industrial developments as well as new residential subdivisions. (City of Newman 2007.)

City of Waterford

The City’s 2025 Vision General Plan’s Urban Design Element encourages restoration and maintenance of historic buildings or sites, as illustrated by Policy UD-3c (“Encourage the preservation and enhancement of buildings of special historic and/or architectural interest”). (City of Waterford 2006.)

City of Patterson

The Patterson General Plan’s Parks, Recreation, and Cultural Resources Element contains a number of policies to preserve and enhance the City’s historical heritage. These include Policies PR-4.1 (“Protection of significant structures. The City shall set as a high priority the protection and enhancement of Patterson’s historically and architecturally significant buildings.”) and PR-4.2 (“Historic district. The City shall maintain a historic district in the downtown area and along East Las Palmas Avenue and develop standards for the preservation and rehabilitation of historic structures and compatible infill development. New development near designated historic landmark structures and sites shall be designed to be compatible with the character of the designated historic

resource.”). In addition, the Patterson Historical Society maintains a list of buildings of special historical interest.

In addition, Goal PR-5 is “to protect Patterson’s Native American Heritage.” Policies under this goal provide directives to consult with Native Americans over development projects, coordinate with the Central California Information Center regarding development proposals, and avoid sensitive sites where possible. (City of Patterson 2010.)

Airport Land Use Compatibility Plan

The ALUCP does not specifically address or set policies for cultural resources and would not alter any aspects of the general plan update that might affect cultural resources.

Existing Conditions

Prehistoric Background

The prehistoric populations of Stanislaus County include the territories of the Northern Valley Yokuts and the Plains and Sierra Miwok. Geographically, the Miwoks occupied the eastern edge of Stanislaus County in the foothills, while the Yokuts lived in the Valley (Santos 2002).

It is estimated that the Yokuts population ranged from 11,000 to 31,000 at European contact and was concentrated along waterways and on the east side of the San Joaquin River (Wallace 1978, Latta 1977). Settlements were typically composed of single-family dwellings, sweathouses, and ceremonial structures. Subsistence revolved around water resources in the San Joaquin Valley (Wallace 1978).

The Miwok population at European contact is estimated to have been around 9,000. Miwok territory was focused on the westward slope of the Sierra Nevada range and in the eastern Central Valley along the San Joaquin and Sacramento rivers. Miwok villages were composed of single-family dwellings, sweat houses, and semi-subterranean dance houses. Subsistence was focused on gathering plant foods, such as acorns, and deer hunting (Kroeber 1919, California Department of Parks and Recreation 2013).

Historic Background

European presence in Stanislaus County began as early as 1806, when Lieutenant Gabriel Moraga and Father Pedro Munoz led 25 men from Mission San Juan Bautista to explore the Central Valley for suitable mission locations (Santos 2002, Tinkham 1921). However, no missions were founded in Stanislaus County, and the Spanish had little control over the San Joaquin Valley in general (Wallace 1978).

In 1821, Mexico achieved independence from Spain. The years following independence saw the privatization of mission lands in California with the passage of the Secularization Act of 1833, which enabled Mexican governors in California to distribute mission lands to individuals as land grants. Between 1843 and 1846, successive Mexican governors established five land grants within Stanislaus County (Santos 2002).

War between the United States and Mexico led to the transfer of Alta California to the United States with the signing of the Treaty of Guadalupe Hidalgo in 1848. Under this treaty, the U.S. agreed to pay Mexico \$15 million for the conquered territory, including Alta California, Nevada, Utah, and parts of

Colorado, Arizona, New Mexico, and Wyoming. Settlement in California continued dramatically thanks to the Gold Rush of 1849; and on September 9, 1850, California entered the union as a free state (Rolle 2003). Stanislaus County was formed 4 years later from part of Tuolumne County (Santos 2002).

Early settlement in Stanislaus County was focused on the foothills of the Sierra Nevada and on the three rivers in the area. Communities such as La Grange and Knight's Ferry, both located near the Sierra Nevada foothills, began as mining camps along the Tuolumne and Stanislaus rivers. By the 1860s, larger and more permanent settlements were developing along the Stanislaus River. These include Oakdale, New Hope, Adamsville, and Paradise. Initially, wheat was the primary agricultural crop County because it provided farmers with a source of income relatively quickly. Other cereal grains, such as barley and oats, were also common. Steamboats and small barges on the San Joaquin River provided early transportation for freight and passengers. Hill's Ferry and Grayson became important shipping points for wheat during the 1860s (Hoover and Kyle 2002:517), and numerous settlements were established on the San Joaquin, Stanislaus, and Tuolumne rivers, particularly at ferry crossing points.

River towns were generally abandoned in favor of railroad towns beginning in the 1870s (Santos 2002). Development on the valley floor in support of the agricultural industry was energized when the Central Pacific Railroad (later Southern Pacific Railroad) came to Stanislaus County. Railroads played a key role in the formation of Stanislaus County's two largest cities, Modesto and Turlock, as well as the smaller towns. Like Modesto, Turlock was established in 1871 along the railroad line. During the late nineteenth and early twentieth centuries, Turlock developed as a shipping point and retail center for surrounding farms. Southern Pacific Railroad branch lines constructed through the county in the 1880s stimulated the development of small commercial centers such as Oakdale, Waterford, and Newman.

Implementation of new irrigation systems expanded opportunities for agricultural diversification in Stanislaus County. For example, although wheat was very important, alfalfa quickly became a leading crop that provided feed for growing herds of dairy cattle. The cultivation of orchard crops such as peaches, apricots, almonds, and oranges also became more prevalent. Although the agricultural economy fluctuated during the twentieth century, it remains a key element of the county's economy today.

Cultural Resources Inventory

To compile a listing of recognized cultural resources within Stanislaus County, information was obtained from the State Office of Historic Preservation. Resources are shown in Table 3.5-1. Included in the table are sites listed on the NRHP, sites designated as a California State Landmark, and sites listed as California Points of Historical Interest. Not included are sites that are solely on Modesto's local list. Within Stanislaus County, there are 20 NRHP listings, 5 state landmarks, and 7 points of historical interest. The majority of these are located in urban areas east of State Route 99.

Table 3.5-1. Stanislaus County Historical Resources

Location	Resource Name	NRHP	State Landmark	Point of Historical Interest
Ceres	Whitmore, Daniel, House	X		
County Highway J-7 Empire	Empire City		X	
Denair	Denair Mercantile Development Company Building			X
Knights Ferry and vicinity	Knights Ferry		X	
Knights Ferry vicinity	Willms Ranch		X	
La Grange	Kingen Hotel	X		
La Grange	La Grange		X	
La Grange	La Grange Dam			X
La Grange	Louie's Place	X		
La Grange	Odd Fellows Halls	X		
La Grange	Old Adobe Barn	X		
La Grange	Old La Grange Schoolhouse	X		
La Grange	Shell Gas Station	X		
La Grange	St. Louis Catholic Church	X		
La Grange	Stage Stop	X		
La Grange vicinity	Gold Dredge	X		
Unincorporated County	Adamsville			X
Modesto	McHenry Mansion	X		X
Unincorporated County (Empire)	Paradise			X
Modesto	U.S. Post Office	X		
Modesto	Walton, Dr. Robert and Mary, House	X		
Modesto	Wood, Walter B., House	X		
Oakdale	First National Bank of Oakdale Building	X		
Patterson	Patterson Branch Library	X		
Patterson	Plaza Building	X		
Riverbank	Riverbank Branch Library	X		
Turlock	Temporary Detention Camps for Japanese Americans - Turlock Assembly Center		X	
Turlock	Turlock Carnegie Library	X		
Turlock	Turlock High School Auditorium and Gymnasium	X		
Westley	Grayson			X
Westley	Tuolumne City			X

Source: California Office of Historic Preservation 2013.

3.5.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan updates; discusses the individual impacts relative to the thresholds of significance; identifies mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and indicates the overall significance of the impact with mitigation incorporated.

Major Sources Used in Analysis

The major sources used in this analysis are listed below.

- Stanislaus County General Plan Update 1994
- Final Programmatic Environmental Impact Report, 2014 Regional Transportation Plan/Sustainable Communities Strategy, Stanislaus County (Stanislaus Council of Governments [StanCOG] 2014) (StanCOG EIR).

Approach and Methodology

For this EIR, the County referred to data recently obtained during the creation of the StanCOG EIR. The County obtained listings of historical resources from the California State Office of Historic Preservation, which provided the county resources listed in the NRHP (20), those designated as a California State Landmark (5), and/or those listed as California Points of Historical Interest (7). All of these are built environment resources (houses, buildings, etc.) The County does not maintain a list or database of archaeological resources. The changes to the general plan were then compared against the existing knowledge of historical and cultural resources in order to identify the potential for implementation of the general plan updates to impact existing historical resources. No new field work or background record searches were conducted for the preparation of this program EIR. The general plan update was analyzed for programmatic changes to the avoidance or mitigation of impacts on cultural resources set forth in the current general plan.

Thresholds of Significance

Based on State CEQA Guidelines Appendix G, the plan updates would have a significant impact with respect to cultural resources if they would result in any of the following.

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
- Disturb any human remains, including those interred outside of formal cemeteries.

According to State CEQA Guidelines Section 15126.4(b), public agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature. The following factors listed under Section 15126.4(b)(3) must be considered for a project involving such an archaeological site.

- (A) Preservation in place (avoidance) is the preferred manner of mitigating impacts to archaeological sites. Preservation in place maintains the relationship between artifacts and the archaeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.

- (B) Preservation in place may be accomplished by, but is not limited to, the following:
- Planning construction to avoid archaeological sites;
 - Incorporation of sites within parks, green space, or other open space;
 - Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site.
 - Deeding the site into a permanent conservation easement.
- (C) When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken. Such studies shall be deposited with the California Historical Resources Regional Information Center. Archaeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 Health and Safety Code.
- (D) Data recovery shall not be required for a historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource, provided that the determination is documented and that the studies are deposited with the California Historical Resources Regional Information Center.

Impacts and Mitigation Measures

The 2014 updates to the Stanislaus County General Plan incorporate changes that have occurred in terms of legislation, regulatory codes, and extension of the planning horizon. Changes have been incorporated into the Land Use, Circulation, Conservation/Open Space, Noise, and Safety elements. The ALUCP is also being updated.

Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 (significant and unavoidable)

The changes to the Conservation and Open Space Element involve only minor revisions to the goal, policies, and implementation measures pertaining to cultural resources.

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 archaeological, historical and archeological, and paleontological resources for future generations.

IMPLEMENTATION MEASURES

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.

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.

Although the concentration of future development in already urbanized areas and circulation improvements may indirectly increase the quantity of projects seeking the demolition, alteration, or relocation of CEQA historic resources, the general plan updates do not alter County policies regarding the significance of impacts on CEQA historic resources.

Similarly, the proposed general plan update and ALUCP policies do not alter the significance of the impacts on historic resources. General plan updates do not modify the procedures or policies regarding how historical resources are identified or evaluated for eligibility; nor do the updates change how impacts on historic resources are accessed or mitigated under the general plan. Therefore, any projects resulting from the promotion of increased urban density or the improvement of transportation networks would continue to require project-level review.

The responsible departments for several of the implementation measures under Goal Eight, Policies Twenty-Four and Twenty-Five have been updated. Those changes that pertain to paleontological resources are discussed in Section 3.6, *Geology, Soils, and Paleontological Resources*. No other changes pertaining to any of the cultural resources goals, policies, and implementation measures were made in the proposed 2014 general plan updates. Additional information obtained from any Native American consultation conducted per SB 18 and the minor changes in the departments responsible for the existing implementation measures would not have any potential impacts on cultural resources.

In general, prior to commencement of any action, development, or land use changes on lands subject to federal jurisdiction, or for projects involving federal funding, a cultural resource survey and an environmental analysis must be prepared. These, in concert with County general plan policies and state laws described above, would largely avoid substantial adverse changes in the significance of historical resources. Historical resources are also protected under the regulations of the NHPA when projects involve federal agencies.

The ALUCP regulates development projects to some degree, but does not authorize them, even indirectly. As a result, the ALUCP update would not result in any substantial adverse effect on significant historical resources.

However, development pursuant to the general plan, as amended by the project will result in changes to existing cultural resources. At the individual project level, there may be future projects that are consistent with the general plan, comply with all state and local laws that are protective of significant historical resources, and still result in a significant adverse impact on a historical resource. Typically, this would be a project that demolishes or otherwise destroys a significant historical resource. Demolition or destruction cannot be mitigated under CEQA (*Architectural Heritage Association. v. County of Monterey* [2004] 122 Cal. App. 4th 1095; *League for Protection of Oakland's Architectural and Historic Resources v. City of Oakland* [1997] 52 Cal. App. 4th 896). It is reasonable to assume that there will be development projects with this impact in the future. Therefore, when examined in conjunction with development under the general plan, the updates would result in a significant and unavoidable impact.

Significance: Significant and unavoidable (no mitigation available)

Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 (significant and unavoidable)

Archaeological resources are known to be present throughout Stanislaus County. Therefore, it is possible that future development, redevelopment, and construction activities proposed under the general plan update may result in direct or indirect impacts on both prehistoric and historic archaeological resources. There are no development projects associated with the revised plans for the ALUCP. If archaeological resources are present in the areas where development is planned to occur, they could be damaged by earth-disturbing construction activities, such as excavation for foundations, placement of fills, trenching for utility systems, and grading for roads and staging areas. In particular, construction activities may disturb such resources, thereby exposing them to potential vandalism, or causing them to be displaced from the original context and integrity. Additionally, transportation improvements could restrict access to previously accessible locations that are important to Native Americans. This is considered a significant impact. Specific analysis will be required under CEQA when individual projects are proposed. In general, however, causing a substantial adverse change in the significance of an archaeological resource that has the potential to yield information important to the prehistory or history of the local area, California, or the nation in general, would be considered significant.

The state policies and regulations discussed above relating to Native American heritage and treatment of Native American burials will reduce the potential for significant impacts. Assembly Bill 52, to take effect in July 2015, will provide further protections for tribal cultural resources as well as archaeological resources through the CEQA process. AB 52 will require the county to consult with affiliated California tribes and prepare an EIR for those projects that may arguably result in a significant adverse effect on a Native American cultural resource.

Goal Eight, Policy Twenty-Four of the Conservation/Open Space Element provides measures for protecting archaeological and paleontological resources (see Impact CUL-1). Because the proposed general plan updates regarding cultural resources are very minor, the impacts anticipated on existing cultural resources would not be much different than those under the existing general plan. Implementation of the above policy, implementation measures, and AB 52 would reduce impacts from implementation of the project on existing archaeological and tribal cultural resources, but not to a less than significant level.

AB 52 establishes that an adverse effect on a tribal cultural resource is a significant effect on the environment. While it would require preparation of an EIR in those situations where a future development project would have such an effect or destroy a tribal cultural resource, the EIR would not prohibit approval of that development project. Therefore, it is reasonably foreseeable that there may be a future situation where a tribal cultural resource could be irreparably harmed, resulting in a significant and unavoidable impact.

Significance: Significant and unavoidable (no mitigation available)

Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries (less than significant)

Buried human remains that were not identified during previous research and field studies also could be inadvertently unearthed during ground-disturbing activities, possibly resulting in damage to the human remains. Therefore, human remains could be damaged or destroyed by future development

related to build out of the Stanislaus County General Plan. In the absence of regulations, this impact would be significant.

The state regulations discussed above relating to the treatment of burials will reduce the potential for significant impacts. Future CEQA analysis of development projects will similarly promote the identification of remains and their proper, respectful disposition. In addition, Goal Eight, Policy Twenty-Four of the Conservation/Open Space Element provides measures for protecting archaeological and paleontological resources (see Impact CUL-1). As noted previously, paleontological resources are addressed in Section 3.6, *Geology, Soils, and Paleontological Resources*. Because the proposed general plan updates would not reduce the effectiveness of these controls, no new impacts are anticipated on human remains. To the extent that the remains are of Native Americans, the impact is addressed in Impact CUL-2, above. Implementation of the above policies and implementation measures, and measures required under state law, including CEQA, would reduce impacts on human remains to less than significant. No additional mitigation is required.

Significance without Mitigation: Less than significant (no mitigation required)

3.5.4 References Cited

Printed References

- California Department of Parks and Recreation. 2013. *The Miwok People*. Available: http://www.parks.ca.gov/?page_id=22538. Accessed: December 23, 2014.
- California Office of Historic Preservation. 2013. *California Historical Resources: Stanislaus County*. <http://ohp.parks.ca.gov/ListedResources/?view=county&criteria=50>. Accessed: January 7, 2015.
- City of Hughson. 2005. *Hughson General Plan*. Available: <http://hughson.org/wp-content/uploads/2012/03/Complete-Final-GP2.pdf>. Accessed: January 7, 2015.
- City of Newman. 2007. *Newman 2030 General Plan*. Available: <http://www.cityofnewman.com/departments/community-development/e-docs.html>. Accessed: January 7, 2015.
- City of Oakdale. 2013. *Oakdale 2030 General Plan*. Available: https://drive.google.com/file/d/0B8bSmVI_fycebGI2S2RoVE1tdHc/edit?usp=sharing&pli=1. Accessed: January 7, 2015.
- City of Patterson. 2010. *Patterson General Plan*. Available: <http://www.ci.patterson.ca.us/145/General-PlanCity-Maps>. Accessed: January 7, 2015.
- City of Turlock. 2012. *Turlock General Plan, Conservation Element*. Available: <http://www.ci.turlock.ca.us/pdflink.asp?pdf=documents/development/services/planning/genera/planch7.pdf>. Accessed: January 7, 2015.
- City of Waterford. 2006. *Waterford Vision 2025 General Plan*. Available: xxx. Accessed: January 7, 2015.
- County of Stanislaus, Planning and Community Development Department. 2005. *Final Program Environmental Impact Report, Stanislaus County Focused General Plan Update of the Circulation Element*. Prepared for the County of Stanislaus, Modesto, CA.

- Hoover, M. B., and D. E. Kyle 2002. *Historic Spots in California*. Stanford University Press
- Kroeber, A. L. 1919. The Miwok. *Handbook of Indians of California, Bulletin 78*. Bureau of American Ethnology of the Smithsonian Institution.
- Latta, F. F. 1977. *Handbook of the Yokuts Indians*. 2nd edition. Revised. Santa Cruz, CA: Bear State Books.
- Moratto, M. J. 1984. *California Archaeology*. San Francisco, CA: Academic Press.
- National Park Service. 1995. *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation* (National Park Service, U. S. Department of Interior 1995)
- Rolle, A. F. 2003. *California: A History*. 6th edition. Harlan Davidson.
- Santos, R. L. 2002. *Chronology of Stanislaus County History Through 1912*. Available: <http://www.library.csustan.edu/bsantos/chronology.html>. Accessed: December 22, 2104. California State University, Stanislaus.
- Stanislaus Council of Governments. 2014. *Final Programmatic Environmental Impact Report, 2014 Regional Transportation Plan/ Sustainable Communities Strategy, Stanislaus County*. Prepared for the County of Stanislaus, Modesto, CA.
- Tatam, R. D. 1994. *Old Times in Stanislaus County: A Journey to the Past*. Modesto, California. Highland Publishers.
- Tinkham, G. H. 1921. *History of Stanislaus County California*, Los Angeles, CA: Historic Record Company.
- Wallace, W. J. 1978. Northern Valley Yokuts. Pages 462–470 in R. F. Heizer (ed.), *Handbook of North American Indians. Volume 8: California*. Washington, DC: Smithsonian Institution.
- Weeks, K. D. and Grimmer, A. E. 1995. *The Secretary of Interior's Standards for the Treatment of Historic Properties*, Washington, D.C.: U. S. Department of Interior, National Park Service.

3.6 Geology, Soils, and Paleontological Resources

3.6.1 Introduction

This section discusses the impacts of the plan updates with respect to geology, soils, and paleontological resources. It lists the thresholds of significance that form the basis of the environmental analysis, describes the geology, soils, and paleontology study area and major sources used in the analysis, provides environmental setting information that is relevant to geology, soils, and paleontological resources, and assesses whether the plan updates would result in significant impacts with respect to this resource.

Study Area

The geology, soils, and paleontological resources study area for the EIR is defined as unincorporated Stanislaus County.

3.6.2 Environmental Setting

This section describes the federal, state, and local regulations and policies that are applicable to the plan updates, and the existing conditions pertaining to geology, soils, and paleontological resources in the study area. The existing conditions will constitute the baseline for the environmental analysis.

Regulatory Setting

This section describes the federal, state, regional, and local regulations related to geology, soils, and paleontological resources that would apply to the plan updates.

Federal

U.S. Geological Survey National Landslide Hazard Program

To fulfill the requirements of Public Law 106-113, the U.S. Geological Survey created the National Landslide Hazards Program to reduce long-term losses from landslide hazards by improving understanding of the causes of ground failure and suggesting mitigation strategies. The Federal Emergency Management Agency is the responsible agency for the long-term management of natural hazards.

Paleontological Resources Act of 2009

The Paleontological Resources Act of 2009 (Public Law No. 111-11, Subtitle D) provides for the protection and preservation of paleontological resources. Under this law, the Secretaries of both the Department of the Interior and the Department of Agriculture are directed to inventory, manage, and protect paleontological resources on the public lands they administer. In addition, the Secretaries are directed to coordinate these efforts and to establish education programs to increase public awareness of the significance of paleontological resources. The law also prohibits the collection of paleontological resources from federal land without a permit, except in the case of noncommercial collecting that complies with other regulations for that federal land.

State

Alquist-Priolo Earthquake Fault Zoning Act

California's Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (PRC Section 2621 et seq.), originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act and renamed in 1994, is intended to reduce risks to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy¹ across the traces of active faults and strictly regulates construction in the corridors along active faults (earthquake fault zones). It also defines criteria for identifying active faults, giving legal weight to terms such as *active*, and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones.

Under the Alquist-Priolo Act, faults are zoned, and construction along or across them is strictly regulated if they are "sufficiently active" and "well-defined." A fault is considered sufficiently active if one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined for purposes of the act as referring to approximately the last 11,000 years). A fault is considered well-defined if its trace can be identified clearly by a trained geologist at the ground surface, or in the shallow subsurface using standard professional techniques, criteria, and judgment (Bryant and Hart 2007).

Seismic Hazards Mapping Act

Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 (PRC Sections 2690–2699.6) is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act: the state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards; and cities and counties are required to regulate development within mapped seismic hazard zones.

Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites within seismic hazard zones until appropriate site-specific geologic and/or geotechnical investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans. Geotechnical investigations conducted within Seismic Hazard Zones must incorporate standards specified by California Geological Survey Special Publication 117a, *Guidelines for Evaluating and Mitigating Seismic Hazards* (California Geological Survey 2008).

Clean Water Act Section 402—General Permit for Construction and Other Land Disturbance Activities

The Clean Water Act (CWA) is discussed in detail in Section 3.9, *Hydrology and Water Quality*. However, because CWA Section 402 is directly relevant to grading activities, additional information is provided here.

¹ With reference to the Alquist-Priolo Act, a *structure for human occupancy* is defined as one "used or intended for supporting or sheltering any use or occupancy, which is expected to have a human occupancy rate of more than 2,000 person-hours per year" (14 CCR 2, Section 3601[e]).

Section 402 of the CWA mandates that certain types of construction activity comply with the requirements of the United States Environmental Protection Agency's (EPA's) National Pollutant Discharge Elimination System (NPDES) program. EPA has delegated to California's State Water Resources Control Board (SWRCB) the authority for the NPDES program in California, where it is implemented by the state's nine Regional Water Quality Control Boards (RWQCBs).

Dischargers whose projects disturb 1 or more acres of soil, or less than 1 acre but that are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the SWRCB's General Order 2010-0014-DWQ. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. Construction General Permit applicants are required to prepare a Notice of Intent and a stormwater pollution prevention plan (SWPPP) and implement and maintain best management practices (BMPs) to avoid adverse effects on receiving water quality as a result of construction activities, including earthwork.

Coverage under the General Permit is obtained by submitting permit registration documents to the SWRCB that include a risk level assessment and a site-specific SWPPP identifying an effective combination of erosion control, sediment control, and non-stormwater BMPs. The General Permit requires that the SWPPP define a program of regular inspections of the BMPs and, in some cases, sampling of water quality parameters.

In Stanislaus County, state NPDES Stormwater Permits are obtained from the Central Valley RWQCB.

The County has prepared a Storm Water Management Program to meet the terms of the General Permit. In addition, in July 2014, the County updated its Standards and Specifications (Stanislaus County Department of Public Works 2014) to meet current regulations, including bringing these construction design requirements into compliance with the Construction General Permit 2009-0009-DWQ requirements. The purpose of the County's Standards and Specifications is to "establish minimum design requirements for the construction of improvements in the public rights of-way, residential subdivisions, commercial developments, industrial developments, and other types of development projects that are subject to the approval of the Department of Public Works or are to be dedicated to the County for maintenance and/or operations."

Clean Water Act Section 402—Municipal Separate Storm Sewer System Program

EPA defines a municipal separate storm sewer system (MS4) as any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, country, or other public body having jurisdiction over stormwater, that is designed or used for collecting or conveying stormwater. As part of the NPDES program, EPA initiated a program requiring that entities having MS4s apply to their local RWQCB for stormwater discharge permits. The program proceeded through two phases. Under Phase I, the program initiated permit requirements for designated municipalities with populations of 100,000 or more to obtain NPDES permit coverage for their stormwater discharges. Phase II expanded the program to municipalities with populations less than 100,000 as well as small MS4s outside the urbanized areas that are designated by the permitting authority to obtain NPDES permit coverage for their stormwater discharges.

Generally, Phase I MS4s are covered by individual permits and Phase II MS4s are covered by a general permit. Each regulated MS4 is required to develop and implement a storm water

management program to reduce the contamination of stormwater runoff and prohibit illicit discharges.

The County has an MS4 permit. As with the General Permit, the County updated its Standards and Specifications to meet current regulations, including bringing these construction design requirements into compliance with the NPDES General Permit and Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4) Order No. 2013-0001-DWQ requirements.

2013 California Building Standards Code

The State's minimum standards for structural design and construction are given in the California Building Standards Code (CBSC) (CCR, Title 24). The CBSC is based on the IBC (International Code Council 2012), which is used widely throughout United States (generally adopted on a state-by-state or district-by-district basis) and has been modified for California conditions with numerous, more detailed or more stringent regulations. The CBSC requires that "classification of the soil at each building site will be determined when required by the building official" and that "the classification will be based on observation and any necessary test of the materials disclosed by borings or excavations." In addition, the CBSC states that "the soil classification and design-bearing capacity will be shown on the (building) plans, unless the foundation conforms to specified requirements." The CBSC provides standards for various aspects of construction, including (i.e., not limited to) excavation, grading, and earthwork construction; fills and embankments; expansive soils; foundation investigations; and liquefaction potential and soil strength loss. In accordance with California law, certain aspects of the project would be required to comply with all provisions of the CBSC.

The California Building Code (CBC) requires extensive geotechnical analysis and engineering for grading, foundations, retaining walls, and other structures, including criteria for seismic design. The County's standard practice is to adopt by reference the latest versions of the CBSC into Title 16 (Buildings and Construction) of the Stanislaus County Code.

California Public Resources Code

Several sections of the California Public Resources Code protect paleontological resources. Section 5097.5 prohibits "knowing and willful" excavation, removal, destruction, injury, and defacement of any paleontological feature on public lands (lands under state, county, city, district, or public authority jurisdiction, or the jurisdiction of a public corporation), except where the agency with jurisdiction has granted express permission. Section 30244 requires reasonable mitigation for impacts on paleontological resources that occur as a result of development on public lands.

Local

Geologic and Seismic Hazards

Stanislaus County General Plan Goals and Policies

The Safety Element of the County's general plan has two goals related to geologic and seismic hazards. Each is supported by policies and implementation measures.

GOAL ONE. Prevent loss of life and reduce property damage as a result of natural disasters.

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.
2. Development in areas of geologic hazard shall be considered for approval only where the development includes an acceptable evacuation route.
3. Development proposals adjacent to reservoirs shall include evaluations of the potential impacts from a seismically induced seiche.
4. The routes of new public roads in areas subject to significant seismic hazard shall be designed to minimize seismic risk.
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.

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.
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.
3. The routes of new public roads in areas subject to landslides shall be designed to minimize landslide risks.

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.

GOAL TWO. Minimize the effects of hazardous conditions that might cause loss of life and property.

POLICY FOURTEEN. The County will continue to enforce state-mandated structural Health and Safety Codes, including but not limited to the Uniform Building Code, the Uniform Housing Code, the Uniform Fire Code, the Uniform Plumbing Code, the National Electric Code, and Title 24.

(Comment: The Uniform Building Code includes provisions for safe construction under the most current standards. The Uniform Housing 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 Building Code.
2. All complaints of substandard dwellings shall be acted upon to ensure compliance with the Uniform Housing Code.
3. The Uniform Fire Code shall be followed in inspections and maintenance of structures regulated under that code.

The Conservation Element of the County's general plan has one policy and various implementation measures related to geologic and seismic hazards.

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.
2. Development will not be permitted in floodways unless it meets the requirements of Chapter 16.40 of the County Code and is approved by the State Reclamation Board.
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.
4. The County shall enforce the subdivision ordinance requirement for soils reports, which may be required to include a geologic report.
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.

County Code

The county has adopted the CBC, as published by the International Code Council, 2013 Edition. The CBC is updated on a triennial cycle, and it is the County's practice to adopt the latest version on a triennial basis.

County Grading Permit

The Development Services Division of the County's Public Works Department is responsible for issuing grading permits. The division reviews construction site plans and design calculations before issuing a grading permit. In 2014, as part of its Standards & Specifications Update, the County adopted grading standards based on the requirements of the California Building Code (Appendix J [Grading]) and Section 4.106 (Mandatory Measures for Residential and Section 5.106) (Non-residential Site Development) of the California Green Building Standards.

Paleontological Resources

There are no local regulations protecting paleontological resources.

Existing Conditions

Geologic Setting

Stanislaus County spans three geomorphic provinces: the Great Valley, the Coast Ranges, and the Sierra Nevada geomorphic provinces. The largest area of the county is in the San Joaquin Valley portion of the Great Valley geomorphic province, which is in the flat, lowland center of the county; a narrow band on the eastern edge of the county is the Sierra Nevada foothills of the Sierra Nevada geomorphic province; and a broad band on the west side of the county is the steeper Coast Ranges geomorphic province (California Geological Survey 2002).

The San Joaquin Valley floor, a thick sequence of sedimentary deposits, ranges in age from Jurassic through Quaternary. Under the eastern and central portions of the valley, the base of the sequence

likely rests on Mesozoic crystalline rock allied to the plutons of the Sierra Nevada; to the west, basement rocks are believed to be Franciscan metasediments and/or mélange. Mesozoic sedimentary rocks now in the subsurface indicate marine deposition. These rocks are overlain by Tertiary strata reflecting marine, estuarine, and terrestrial conditions, which are in turn overlain by Quaternary fluvial and alluvial strata recording uplift and erosion of the Sierra Nevada and Coast Ranges to approximately their present shape (Norris and Webb 1990:412–426). In the county, the major geologic units of this province, listed from west to east, are the San Joaquin River deposits of the Dos Palos Alluvium (Holocene age), Quaternary alluvial fan deposits (Holocene age), the sedimentary alluvial deposits of the Modesto and Riverbank Formations (Pleistocene age), the alluvium of the Turlock Lake Formation (Pleistocene), the andesitic conglomerates of the Mehrten Formation (Tertiary age), the consolidated alluvium of the Laguna Formation (Plio-Pleistocene), localized outcrops of the sedimentary Ione Formation (Tertiary age), and bands of Quaternary alluvium in stream drainages (Wagner et al. 1991) (Figure 3.6-1).

The Coast Ranges geomorphic province is characterized by an echelon (i.e., parallel to subparallel) northwest-trending mountain ranges formed by active uplift related to complex tectonics of the San Andreas fault/plate boundary system (Norris and Webb 1990:359–380). The eastern Coast Ranges are broadly antiformal (i.e., fold is convex, with oldest geologic units in the core). In the county, the major geologic units of this province consist of a central “core” of Mesozoic units—primarily the Cretaceous Panoche Formation and Franciscan Complex—flanked on the east by an upward younging sequence of marine and terrestrial sedimentary units that include the Moreno Formation (Cretaceous age), the San Pablo Formation (Miocene age), a conglomerate (Miocene age), and alluvial deposits (Quaternary age) (Wagner et al. 1991) (Figure 3.6-1).

The Sierra Nevada geomorphic province is a linear, tilted fault block almost 400 miles long that extends from northern Butte County to the Mohave Desert. Its western slope is gentle (approximately 2 degrees), in stark contrast to its steep eastern slope. Massive granites make up the upper elevation Sierra, which has been shaped by glaciation, such as is seen in Yosemite. Lower in the Sierra is the northwest-trending Mother Lode, which is made up of metamorphic rock containing gold-bearing veins. This western slope is deeply incised by rivers and disappears beneath the sediments of the Great Valley (California Geological Survey 2002:2). The major geologic units of this province are the Gopher Ridge Volcanics (Jurassic age), the rhyolitic tuff and sedimentary rocks that make up the Valley Springs Formation (Tertiary age), the andesitic conglomerates that make up the Mehrten Formation (Tertiary age), and the volcanic rock of the Table Mountain Latite (Tertiary age) (Wagner et al. 1991) (Figure 3.6-1).

Seismicity

Primary Seismic Hazards

The State of California considers two aspects of earthquake events primary seismic hazards: surface fault rupture (disruption at the ground surface as a result of fault activity) and seismic ground shaking.

Surface Fault Rupture

There is a risk of surface rupture where the Ortigalita fault crosses the southwest corner of the county. This portion of the county in the Coast Ranges is in a seismically active region, and Alquist-Priolo earthquake fault zone maps have been prepared for two quadrangles: the Crevison Peak quadrangle and Mustang Peak quadrangle. The Ortigalita Fault, which is a complex zone of reverse,

lateral, and strike-slip faults, is classified as an active fault for much of its length, including in Stanislaus County where it crosses the Crevison Peak and Mustang Peak quadrangles. A designation of active means the fault has shown movement in the last 11,700 years (during the Holocene) and is sufficiently well defined (California Division of Mines and Geology 1985a:9 and 1985b:2; California Division of Mines and Geology 1986a and 1986b; California Geological Survey 2010a) (Figure 3.6-2).

There are no other active faults in the county (California Geological Survey 2010a).

The other nearest active faults are the Greenville Fault Zone and the Corral Hollow-Carnegie Fault Zone, located east of Livermore in the Coast Ranges. The Greenville Fault Zone is a northwest trending strike-slip fault zone that is approximately 55 miles long along the western side of the Diablo Range (Bryant and Cluett 2002:1). The Corral Hollow-Carnegie Fault Zone is a relatively short fault segment, subparallel to and east of the Greenville Fault Zone. Portions of this fault have been active in the last 15,000 years (California Geological Survey 2010a; U.S. Geological Survey 2013).

Strong Ground Shaking

Unlike surface rupture, ground shaking is not confined to the trace of a fault, but rather propagates into the surrounding areas during an earthquake. The intensity of ground shaking typically diminishes with distance from the fault, but ground shaking may be locally amplified and/or prolonged by some types of substrate materials.

The ground-shaking hazard in the county ranges from moderate to low. The ground-shaking hazard is highest in the western portion of the county in the Diablo Range of the Coast Ranges and becomes progressively less eastward across the county. Based on a probabilistic seismic hazard map that depicts the peak horizontal ground acceleration values exceeded at a 10% probability in 50 years, the probabilistic peak horizontal ground acceleration values for the county range from 0.44 in the west to 0.14g in the east (where g equals the acceleration speed of gravity) (California Geological Survey 2008a) (Figure 3.6-3). As a point of comparison, probabilistic peak horizontal ground acceleration values for the San Francisco Bay Area range from 0.4g to more than 0.8g.

Secondary Seismic Hazards

Secondary seismic hazards refers to seismically induced landsliding, liquefaction, and related types of ground failure. As discussed in *Regulatory Setting*, the State of California maps areas that are subject to secondary seismic hazards pursuant to the Seismic Hazards Mapping Act of 1990. However, the state has prioritized coastal urban areas for mapping and has not mapped Stanislaus County. Secondary seismic hazards are addressed briefly below based on available information.

Landslide and Other Slope Stability Hazards

The potential for landsliding in the county varies greatly. The greatest risk of landslides is in the western portion of the county in the steep Diablo Range (California Geological Survey and U.S. Geological Survey 2011). Although the California Geological Survey has not designated any part of the county as a Zone of Required Investigation for landslide hazard (California Geological Survey 2007), two factors make slope instability (both seismically and nonseismically induced) a concern in this area: the steep topography and the potential for moderate ground shaking (California Geological Survey and U.S. Geological Survey 2011).

In addition, slope stability related to precipitation may also be a factor in the Diablo Range. This area has a history of landsliding and is considered a risk area by the County because of the steep slopes and unstable geologic formations (Stanislaus County 2004:29; Stanislaus County 1994:5-4).

There is a moderate risk of landsliding on the far east side of the county in the Sierra Nevada foothills (California Geological Survey and U.S. Geological Survey 2011); however, for most of the county, which is in the flat land of the San Joaquin Valley, there is a low risk or no risk of landsliding (California Geological Survey and U.S. Geological Survey 2011).

Liquefaction and Related Hazards

Liquefaction is the process in which soils and sediments lose shear strength and fail during seismic ground shaking. The vibration caused by an earthquake can increase pore pressure in saturated materials. If the pore pressure is raised to be equivalent to the load pressure, this causes a temporary loss of shear strength, allowing the material to flow as a fluid. This temporary condition can result in severe settlement of foundations and slope failure. The susceptibility of an area to liquefaction is determined largely by the depth to groundwater and the properties (e.g., texture and density) of the soil and sediment within and above the groundwater. The sediments most susceptible to liquefaction are saturated, unconsolidated sand and silt soils (particularly Quaternary age units) with low plasticity within 50 feet of the ground surface (California Geological Survey 2008b:35-36).

There is potential for liquefaction in the county. The portion of the county most susceptible to liquefaction is likely the western margin of the valley because of the combination of young geologic units (Quaternary fan deposits and Dos Palos Alluvium) and potential for strong ground shaking. Therefore, where groundwater is shallow (Section 3.9, *Hydrology and Water Quality*), liquefaction could occur. Other parts of the valley also have young geologic units and shallow groundwater conditions, but the ground-shaking hazard is lower. The CBC requires site-specific technical studies of liquefaction potential during the design of buildings in areas at risk of liquefaction.

The geologic units in the Coast Ranges and Sierra Nevada foothills are likely not susceptible to liquefaction because they are older and more consolidated or because they are igneous. In addition, shallow groundwater is not likely to be present in the steeper terrain.

Land Subsidence

Subsidence is the sinking of a large area of ground surface in which the material is displaced vertically downward, with little or no horizontal movement. Many areas in the Central Valley have experienced subsidence, most notably the San Joaquin Valley and San Joaquin-Sacramento River Delta (Faunt 2009:99). Subsidence occurs in three ways: as a result of groundwater overdraft or oil and gas withdrawal, compaction and oxidation of peat soils, and hydrocompaction (U.S. Geological Survey 2000:1-2). Land subsidence as a result of groundwater overdraft is discussed below. Land subsidence as a result of compaction and oxidation of peat soils and hydrocompaction are not significant concerns in the county and are not discussed.

Groundwater overdraft occurs when groundwater extraction rates exceed the rate of recharge. Overdraft can result in compression of a clay bed within an aquifer to such an extent that it no longer expands to its original thickness after groundwater recharge. Clay beds often compress when wells extract groundwater and expand in response to recharge after pumping stops. Clay beds contain individual clay particles and small pores that fill with groundwater in saturated conditions. Groundwater maintains the pore space, expands the clay particles, and helps the bed maintain its

thickness. A clay bed will yield a certain volume of groundwater (i.e., safe yield) without losing its storage capacity. If safe yield is not exceeded, the clay bed will compress and expand as the soil pores alternately fill with water and drain. This can lead to elastic land subsidence at the ground surface where elevation decreases when water is extracted then increases when water is recharged. If the safe yield of a clay bed is exceeded, however, its pores collapse and the surrounding clay particles settle in their place. When the clay particles settle, the clay bed is effectively thinned, resulting in permanent land subsidence at the ground surface.

Stanislaus County is just north of the region of the San Joaquin Valley most severely affected by land subsidence (Faunt 2009:99), but land subsidence as a result of groundwater overdraft is a serious concern of the county, as expressed in the county's Groundwater Ordinance (County Code Chapter 9.37).

Soils

Soils in the county are best described at a landscape scale, rather than at a detailed scale, because of the large area under consideration. The Natural Resources Conservation Service (NRCS) maps soils at a landscape scale by mapping soil associations. Soil associations are groupings of individual soils that occur together in the landscape and are typically named after the two or three dominant soil series. Soil associations cover broad areas that have a distinctive pattern of soils, relief, and drainage. Figure 3.6-4 shows the soil associations in the county (U.S. Department of Agriculture 2006).

The county's three main physiographic regions in which the soils formed are the San Joaquin Valley, the Sierra Nevada foothills, and the Coast Ranges.

Soil issues of concern in the county include high water table, restricted permeability, and shrink swell potential (Natural Resources Conservation Service 2007). These issues can cause construction concerns. For example, soils with a moderate to high shrink-swell potential, also known as *expansive soils*, expand and contract with changes in moisture content and therefore do not provide a suitable substrate for construction without modification. Larger scale maps showing the individual soil map units that comprise each association are often used for evaluating soil suitability on a site-specific scale (e.g., selecting a building site).

Paleontological Resources

Paleontological sensitivity is a qualitative assessment based on the paleontological potential of the stratigraphic units present, the local geology and geomorphology, and other factors relevant to fossil preservation and potential yield. According to the Society of Vertebrate Paleontology (SVP) (2010), standard guidelines for sensitivity are (1) the potential for a geological unit to yield abundant or significant vertebrate fossils or to yield a few significant fossils, large or small, vertebrate, invertebrate, or paleobotanical remains and (2) the importance of recovered evidence for new and significant taxonomic, phylogenetic, paleoecological, or stratigraphic data (Table 3.6-1).

Table 3.6-1. Paleontological Sensitivity Ratings

Potential	Definition
High	Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Paleontological potential consists of both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, plant, or trace fossils and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data.
Undetermined	Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these rock units have high or low potential to contain significant paleontological resources.
Low	Reports in the paleontological literature or field surveys by a qualified professional paleontologist may allow determination that some rock units have low potential for yielding significant fossils. Such rock units will be poorly represented by fossil specimens in institutional collections, or based on general scientific consensus, will only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule.
None	Some rock units, such as high-grade metamorphic rocks (e.g., gneisses and schists) and plutonic igneous rocks (e.g., granites and diorites), have no potential to contain significant paleontological resources. Rock units with no potential require neither protection nor mitigation measures relative to paleontological resources.

Source: Society of Vertebrate Paleontology 2010.

It is also important to recognize that unlike archaeological sites, which are narrowly defined, paleontological sites are defined by the entire extent (both areal and stratigraphic) of a unit or formation. In other words, once a unit is identified as containing vertebrate fossils, or other rare fossils, the entire unit is a paleontological site (Society of Vertebrate Paleontology 2010:2). For this reason, the paleontological sensitivity of geologic units is described and analyzed broadly, rather than being limited to county boundaries.

Although it is not possible to make a determination of the sensitivity for paleontological resources of each geologic unit because of the county's size, most of the geologic units are highly sensitive for paleontological resources (Figure 3.6-5). The University of California Museum of Paleontology (UCMP) database contains 765 records of vertebrate fossils found in the county (University of California Museum of Paleontology 2014a). These records, by geologic formation, are summarized in Table 3.6-2. In addition, most of the valley is immediately underlain by the Modesto and Riverbank Formations of Late Pleistocene (Wagner et al. 1991). These deposits represent sediment eroded from the uplifting Sierra Nevada. California's Pleistocene sedimentary units—especially those that, like the Modesto and Riverbank Formations, record deposition in continental settings—are typically considered highly sensitive for paleontological resources because of the large number of recorded fossil finds in such units throughout the state.

Table 3.6-2. Paleontological Resources by Geologic Unit

Geologic Unit	Map Abbreviation	Age	Fossils	UCMP Vertebrate Records		Paleontological Sensitivity
				State	County	
Coast Ranges						
Los Banos Alluvium	Qlb	Pleistocene	No known vertebrate fossils but depositional environment and age indicate it has the potential to contain fossils	None	None	Uncertain but likely high
San Pablo Formation	Msp	Miocene	A wide range of vertebrate fossils, including several species of early horses, Gomphotherium (an early relative of the elephant), fox, oredont (a sheep-like herbivore), bassariscus (a relative of the raccoon), rodents, and bony fish (2014b)	1,395	496	High
Fanglomerate	Mf	Miocene	No known vertebrate fossils but depositional environment and age indicate it has the potential to contain fossils	No known	No known	
Kreyenhagen Formation	Ek	Eocene/Oligocene	No known vertebrate fossils but depositional environment and age indicate it has the potential to contain fossils (2014c)	No known	No known	Uncertain but likely high
Tesla Formation	Pet	Paleocene	No known vertebrate fossils but depositional environment and age indicate it has the potential to contain fossils	No known	No known	Uncertain but likely high
Panoche Formation	Kp	Cretaceous	Abundant invertebrate fossils (2014d) and one reptile fossil	1	No vertebrate records	High
Upper Cretaceous-Lower Jurassic marine sandstone and shale	Kju	Cretaceous	No known fossils (2014a) ^a	No vertebrate records	No vertebrate records	Uncertain
Franciscan Complex	Kjf	Cretaceous	A late Jurassic ichthyosaur and a plesiosaurus (2014e)	2	0	High
Greenstone	gs	Cretaceous	No known	0	0	Uncertain
Moreno Formation	Km	Cretaceous	Diverse assemblage of fish and reptiles, including mosasaur, plesiosaur, tortoise, bony fish, and cartilaginous fish, and an amphibian (2014f)	90	3	High

Geologic Unit	Map Abbreviation	Age	Fossils	UCMP Vertebrate Records		Paleontological Sensitivity
				State	County	
Gabbro and diabase (Coast Range Ophiolite)	Jgb	Upper Jurassic-Lower Cretaceous	None	0	0	None
Volcanic rocks	Jv	Jurassic	No known	0	0	Uncertain
Serpentinized ultramafic rock (Coast Range Ophiolite)	um	Upper Jurassic-Lower Cretaceous	None	0	0	None
San Joaquin Valley						
Alluvium in stream drainages	Q	Holocene	Likely too young to contain fossils.	None	None	Low
Dos Palos Alluvium	Qdp	Holocene	No known fossils (2014g) ^a ; and upper portion likely too young to contain fossils. Holocene materials are not typically evaluated as paleontologically sensitive, because biological remains are not considered fossils unless they are older than 5,000 years. Depositional environment and age of lower portion indicate it has the potential to contain fossils. In addition, units overlie sensitive units such as the Modesto Formation.	None	None	Low in shallow subsurface High at depth
Quaternary alluvial fan deposits	Qf					
Patterson Alluvium	Qp					
San Luis Ranch Alluvium	Qsl					
Modesto Formation	Qm	Pleistocene	Include horse, mammoth camel, pocket gopher, bison, and ground sloth (2014h)	27	10	High
Riverbank Formation	Qr	Pleistocene	Include ground sloth, dire wolf, horse, rabbit, birds, wood rat, bison, camel, coyote, antelope, deer, and mammoth, as well as clams, fish, turtles, frogs, snakes (2014i)	348	1	High

Geologic Unit	Map Abbreviation	Age	Fossils	UCMP Vertebrate Records		Paleontological Sensitivity
				State	County	
Turlock Lake Formation	Qtl	Pleistocene	Include horses, ground sloths (Jefferson's ground sloth and Harlan's ground sloth), saber-toothed cat, Armbruster's wolf, scimitar-toothed cat, llama, <i>Tetrameryx irvingtonensis</i> Stirton (ancestor to modern pronghorn), deer, camels, mammoth, smooth-toothed pocket gopher, <i>Capromeryx</i> (pronghorn-like ungulates), coyote, <i>Miracinonyx trumani</i> (American cheetah-like cat), turtle, and tortoise (Dundas et al. 1996) (2014j)	226 (recorded as Riverbank Formation but identified as Turlock Lake Formation in Dundas et al. 1996)	0	High
Laguna Formation	Pl	Plio-Pleistocene	No vertebrate fossils known; however, the alluvial nature of this unit and its degree of consolidation indicate fossils are likely present	None	None	High
Ione Formation	Ei	Eocene/Oligocene	No vertebrate fossils known but abundant plant fossils related to magnolias, cycads, and lilies. May contain vertebrate fossils based on depositional environment and preservation potential (2014k)	No vertebrate records	No vertebrate records	High
Sierra Nevada						
Mehrten Formation		Tertiary	Include extinct horse, primitive rhinoceros, camel, and tortoise (2014l)	302	232	High
Valley Springs Formation		Tertiary	No known fossils but depositional environment and age indicate it has the potential to contain fossils	None	None	Uncertain but likely high
Table Mountain Latite		Tertiary	Plutonic igneous rock so does not contain fossils	None	None	None
Salt Springs and Merced Falls Slate	Jsm	Jurassic	None	None	None	Uncertain
Gopher Ridge Volcanics	Jgo	Jurassic	No known fossils; volcanic rocks may contain fossils but this unit is generally metamorphosed and therefore not fossil-bearing	None	None	Low
Copper Hills Volcanics	Jch	Jurassic	No known fossils	None	None	Low
^a All 2014 dates are references to University of California, Berkeley, Museum of Paleontology (2014) searches conducted by ICF International.						

Figure 3.6-5 is a map showing the general paleontological sensitivity of the surficial geologic units in the county. This map was created using GIS data from the statewide geologic map (California Geological Survey 2010b) and therefore groups similar geologic units together.

Table 3.6-3 correlates the geologic units shown on Figure 3.6-1, the regional geologic map, and the geologic units shown on Figure 3.6-5, the statewide map. The paleontological sensitivity assigned in Table 3.6-3 is based on the sensitivity shown in Table 3.6-2. Where units with differing sensitivity were grouped in the statewide map, the ranking of the most sensitive unit was used.

Table 3.6-3. General Correlation of Geologic Units Shown on Figures 3.6-1 and 3.6-5

Unit Abbreviation	Designation		Paleontological Sensitivity
	Statewide Map ^a	Regional Map ^b	
Coast Ranges			
Qoa	Older alluvium, lake, playa, and terrace deposits	Los Banos Alluvium	Uncertain but likely high
QPc	Pliocene or Pleistocene sandstone, shale, and gravel deposits	Fanglomerate (Miocene), Tesla Formation, San Pablo Formation	High
Ep	Sandstone, shale, conglomerate (Paleocene)	Tesla Formation and Patterson Alluvium	Uncertain but likely high
E	Sandstone, shale, conglomerate (Eocene)	Kreyenhagen Formation	Uncertain but likely high
Ku	Upper Cretaceous sandstone, shale, and conglomerate	Panoche Formation and Moreno Formation	High
Kl	Lower Cretaceous sandstone, shale, and conglomerate	Panoche Formation	High
J	Shale, sandstone, minor conglomerate, chert, slate, limestone (Jurassic)	Upper Cretaceous-Lower Jurassic marine sandstone and shale	Uncertain
KJf _m , KJf	Franciscan Complex	Franciscan Complex	High
gb	Gabbro and dark dioritic rocks	Gabbro and diabase ^c	None
um	Ultramafic rock	Serpentinized ultramafic rock ^c	None
Mzv	Undivided Mesozoic volcanic and metavolcanic rocks	Volcanic rocks (Jurassic) and greenstone ^c	Uncertain
Valley			
Q	Alluvium, lake, playa, and terrace deposits	Alluvial fan deposits, San Luis Ranch Alluvium, Modesto Formation, Riverbank Formation, Turlock Lake Formation, and Dos Palos Formation	High
QPc	Pliocene or Pleistocene sandstone, shale, and gravel deposits	Turlock Lake Formation, Mehrten Formation, Laguna Formation, and Patterson Alluvium	High
E and Ec	Sandstone, shale, conglomerate (Eocene)	Ione Formation	High

Unit Abbreviation	Designation		Paleontological Sensitivity
	Statewide Map ^a	Regional Map ^b	
Sierra Nevada			
Mc	Sandstone, shale, conglomerate, and fanglomerate (Miocene)	Valley Springs Formation	Uncertain but likely high
Tv	Tertiary volcanic rocks	Table Mountain Latite	None
J	Shale, sandstone, minor conglomerate, chert, slate, limestone (Jurassic)	Salt Springs and Merced Falls Slate	Uncertain
Mzv	Undivided Mesozoic volcanic and metavolcanic rocks	Copper Hill Volcanics and Gopher Ridge Volcanics	Uncertain

^a California Geological Survey 2010b.
^b Wagner et al. 1991.
^c Component of the Coast Range Ophiolite that outcrops in the Franciscan Formation.

3.6.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan updates; the individual impacts relative to the thresholds of significance; mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and the overall significance of the impact with mitigation incorporated.

Major Sources Used in Analysis

The major sources used in this analysis are listed below.

- California Geological Survey website data (Wagner et al. 1991; California Division of Mines and Geology 1985a:9, 1985b:2; California Division of Mines and Geology 1986a, 1986b; California Geological Survey 2010a; Bryant and Cluett 2002:1; California Geological Survey 2008a; California Geological Survey and U.S. Geological Survey 2011)
- NRCS data (2007) and U.S. Department of Agriculture (2006)
- University of California Museum of Paleontology data (2014a–2014l)

Approach and Methodology

Evaluation of the geology and soils impacts in this section is based on information from published maps, reports, and other documents that describe the geologic, seismic, and soil conditions of the county, and on professional judgment. The analysis assumes that the project will conform to the latest CBSC standards, County general plan seismic safety standards, the County grading ordinance, and NPDES requirements.

The primary source of information used in developing the paleontological resources section is the paleontological database at the University of California, Berkeley. Effects on paleontological resources were analyzed qualitatively on a large-scale level, based on professional judgment and the SVP guidelines below.

SVP's *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* provides standard guidelines that are widely followed (Society of Vertebrate Paleontology 2010). These guidelines reflect the accepted standard of care for paleontological resources. The SVP guidelines identify two key phases in the process for protecting paleontological resources from project impacts.

- Assess the likelihood that the area contains significant nonrenewable paleontological resources that could be directly or indirectly impacted, damaged, or destroyed as a result of the project.
- Formulate and implement measures to mitigate potential adverse impacts.

An important strength of SVP's approach to assessing potential impacts on paleontological resources is that the SVP guidelines provide some standardization in evaluating paleontological sensitivity. Table 3.6-4 defines the SVP's sensitivity categories for paleontological resources and summarizes SVP's recommended treatments to avoid adverse effects in each sensitivity category.

No new field work, research, or engineering level design was conducted for the preparation of this EIR.

Table 3.6-4. Society of Vertebrate Paleontology's Recommended Treatment for Paleontological Resources

Sensitivity Category	Mitigation Treatment
High or Undetermined	<p>An intensive field survey and surface salvage prior to earthmoving, if applicable.</p> <p>Monitoring by a qualified paleontological resource monitor of excavations.</p> <p>Salvage of unearthed fossil remains and/or traces (e.g., tracks, trails, burrows).</p> <p>Screen washing to recover small specimens, if applicable.</p> <p>Preliminary survey and surface salvage before construction begins.</p> <p>Preparation of salvaged fossils to a point of being ready for curation (i.e., removal of enclosing matrix, stabilization and repair of specimens, and construction of reinforced support cradles where appropriate).</p> <p>Identification, cataloging, curation, and provision for repository storage of prepared fossil specimens.</p> <p>A final report of the finds and their significance.</p>
Low or no	<p>Rock units with low or no potential typically will not require impact mitigation measures to protect fossils.</p>

Source: Society of Vertebrate Paleontology 2010.

Thresholds of Significance

Based on State CEQA Guidelines Appendix G, the plan updates would have a significant impact with respect to geology, soils, and paleontological resources if it would result in any of the following.

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other

- substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
- Strong seismic ground shaking
 - Seismic-related ground failure, including liquefaction
 - Landslides
 - Result in substantial soil erosion or the loss of topsoil.
 - Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landsliding.
 - Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.
 - Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater.
 - Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Impacts and Mitigation Measures

Impact GEO-1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving fault rupture (less than significant)

Construction on or near an active fault could result in loss, injury, or death involving surface fault rupture. If structures are located on or a near an active fault, rupture of that fault could cause damage or destruction of the structure, resulting in injury, loss of life, or property damage. This would be a significant impact. However, existing Goal One, Policy Three, Implementation Measure 1 of the Safety Element requires enforcement of the Alquist-Priolo Earthquake Fault Zoning Act, which prohibits most construction intended for human occupancy across an active fault trace and strictly regulates construction near an active fault. Compliance with the Alquist-Priolo Earthquake Fault Zoning Act would reduce this risk. The impact would be less than significant, and no mitigation is required.

Significance without Mitigation: Less than significant (no mitigation required)

Impact GEO-2: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides (less than significant)

Construction in areas with potential to experience seismic-related ground failure, such as strong ground shaking, landsliding, and liquefaction could expose people or structures to potential substantial adverse effects. If structures constructed as part of the general plan buildout were not properly designed and sited for the strong ground shaking conditions or the earthquake-induced ground failure conditions present in portions of the county, these structures could fail and cause harm to people or property in the immediate area.

The western part of the county is known to be susceptible to strong ground shaking and landsliding. In addition, there is potential for liquefaction along the western portion of the valley and other areas

in the county where the geologic units are young and unconsolidated, and the depth to groundwater is shallow. The potential damage and harm that could result from strong ground shaking and landsliding would be a significant impact.

The County has updated its general plan to require that all construction in the county comply with the CBSC.

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

4. All building permits shall be reviewed to ensure compliance with the ~~Uniform Building Code~~ California Code of Regulation, Title 24, California Building Codes.

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.

In addition, the general plan has added private roads to the types of roads that should be designed to minimize landslide risks.

GOAL ONE. Prevent loss of life and reduce property damage as a result of natural disasters.

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

3. The routes of new public and private roads in areas subject to landslides shall be designed to minimize landslide risks.

If structures were built in areas susceptible to liquefaction, the foundations could fail and cause damage or collapse of the structure. The CBSC, which has been incorporated by reference into Title 16 of the County Code, requires a soil investigation for all construction, which would indicate whether soils susceptible to liquefaction are present. If such soils are present, the CBSC requires that a geotechnical investigation be conducted by a professional geologist. The County Code incorporates the latest version of the CBSC; therefore, building practices are required to conform to each cycle of building code revisions.

Additionally, Conservation Element Implementation Measure 3 of Goal Five, Policy Sixteen and Safety Element Implementation Measure 1 of Goal One, Policy Four require mitigation of landslide hazards as part of development approvals.

Significance without Mitigation: Less than significant (no mitigation required)

Impact GEO-3: Result in substantial soil erosion or the loss of topsoil (less than significant)

Ground-disturbing earthwork associated with the general plan buildout may increase erosion rates, potentially causing accelerated erosion. Construction activities would cause ground disturbance and vegetation removal on site. As a result, soil would be exposed to rain and wind, potentially causing accelerated erosion, thereby resulting in significant impacts. However, a SWPPP and a grading permit would be prepared for all construction projects, as required by the RWQCB and the county code, which would specify BMPs to prevent soil erosion.

Compliance with the federal and local erosion-related regulations applicable to the general plan buildout (i.e., the SWPPP that is developed for the site and the requirements of the county's municipal code) would ensure that the construction activities do not result in significant erosion. This impact would be less than significant, and no mitigation is required.

Significance without Mitigation: Less than significant (no mitigation required)

Impact GEO-4: Location on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide (less than significant)

In addition to the seismic-related ground failure described in Impact GEO-1, buildout in areas with the potential to experience nonseismic-related landsliding caused by heavy precipitation could also expose people or structures to potential substantial adverse effects. The area susceptible to landslide is west of I-5. If foundations were not properly designed and sited for the landslide conditions present in this area, they could fail and cause harm to people or property.

The area west of I-5 consists of steep, hilly terrain known to be susceptible to landslides. The potential damage and harm that could result from landsliding would be a significant impact.

The county requires that all construction comply with the CBSC and that a geotechnical report be prepared in areas susceptible to landslides. The geotechnical report must document evidence that no landslide potential exists on the site or identify the extent of the problem and the mitigation measures necessary to correct the landslide problem. Compliance with the CBSC and the County's general plan would reduce this risk. This impact would therefore be less than significant, and no mitigation is required.

Significance without Mitigation: Less than significant (no mitigation required)

Impact GEO-5: Location on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property (less than significant)

Expansive soils occur in the county, and structures built on expansive soils would be subject to the expansion and contraction of these soils, which could cause structural damage if the subsoil, drainage, and foundation are not properly engineered. However, soil sampling and treatment procedures for expansive soils, as well as other soil-related issues, are addressed by the CBC. Compliance with the CBSC would create conditions suitable for construction. This impact would be less than significant, and no mitigation is required.

Significance without Mitigation: Less than significant (no mitigation required)

Impact GEO-6: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater (less than significant)

Septic systems would be installed in areas that have no public sewer as county buildout occurs. Goal Two, Policy Five in the Conservation/Open Space Element of the general plan encourages new development to be served by the public sewer system, rather than a septic system (see Section 3.9, *Hydrology and Water Quality*). Septic system installations are subject to County regulation and permitting requirements that ensure the proper operation of the system. The septic system's design depends on the permeability and other aspects of the soil in which it will be located. Under County code requirements, in areas where standard septic tank systems are not suitable, a licensed soil scientist would be required to design an alternative wastewater disposal system that can meet State and County building codes. This impact would be less than significant, and no mitigation is required.

Significance without Mitigation: Less than significant (no mitigation required)

Impact GEO-7: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (less than significant)

Many of the geologic units in the county are highly sensitive for paleontological resources (see Table 3.6-2). If fossils are present where development is planned, they could be damaged by earth-disturbing activities during construction, such as excavation for foundations, placement of fills, trenching for utility systems, and grading for roads and staging areas. The more extensive and deeper the earth-disturbing activity, the greater the potential for damage to paleontological resources. The general plan update addresses paleontological resources in Policy Twenty-Four and Implementation Measure 5 of Conservation Element Goal Eight.

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.

IMPLEMENTATION MEASURE

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.

This substantially reduces the potential for paleontological resources to be damaged or destroyed by future development related to buildout of the general plan and ensures this impact will be less than significant.

Significance without Mitigation: Less than Significant (no mitigation required)

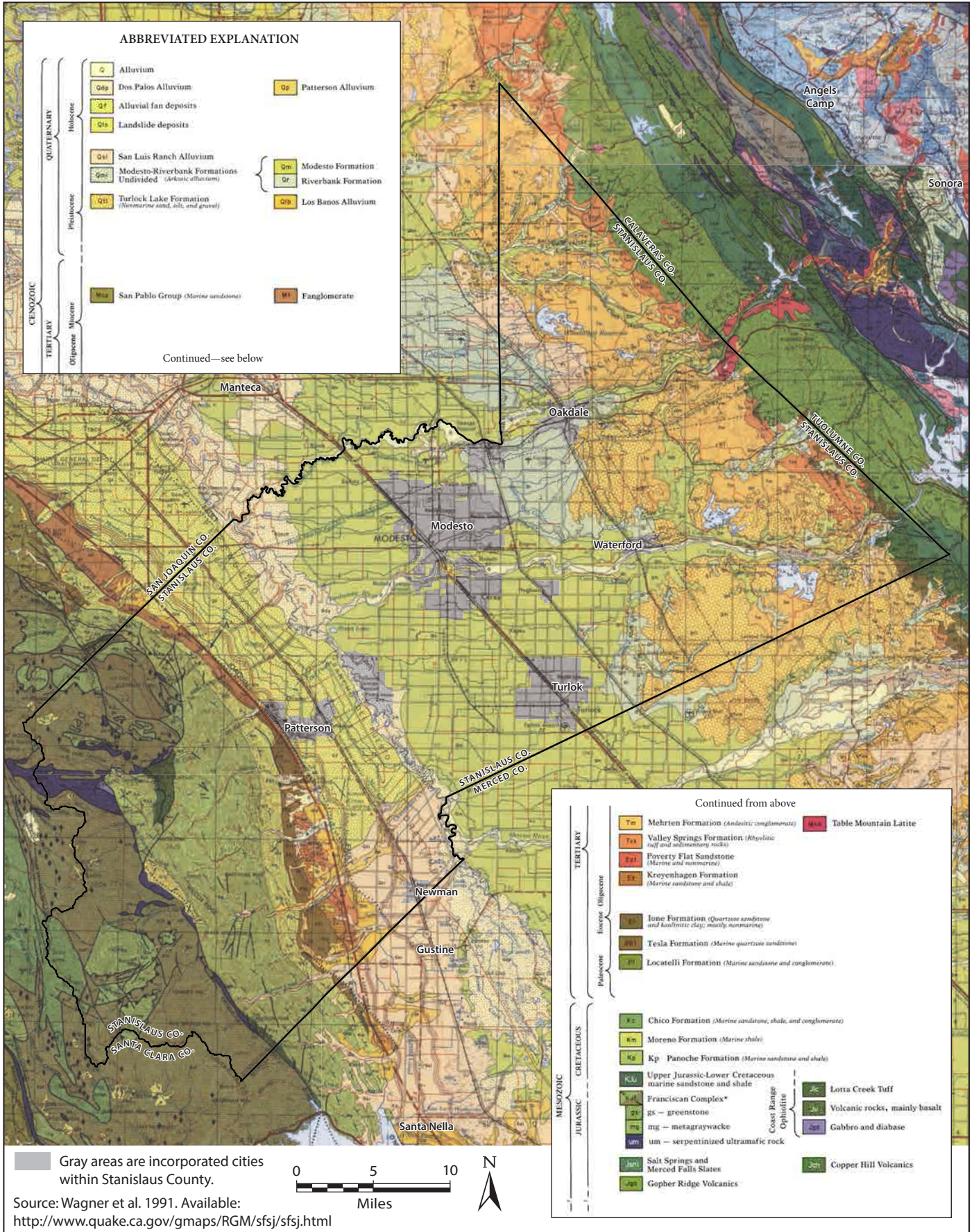
3.6.4 References Cited

Printed References

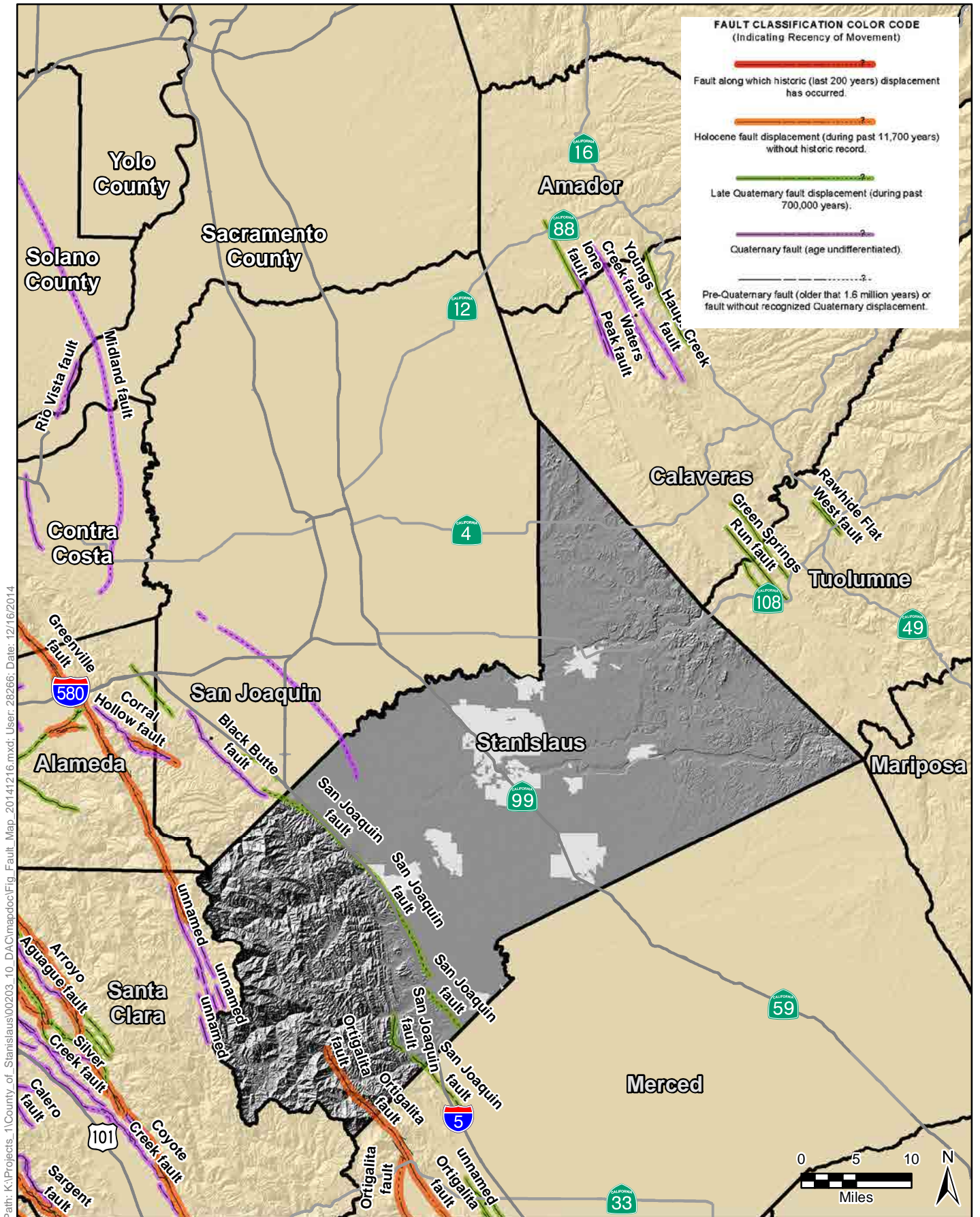
- Bryant, W. A., and S. E. Cluett. 2002. *Complete Report for Greenville Fault Zone, Arroyo Mocho Section (Class A) No. 53c, in Quaternary Fault and Fold Database of the United States*. Last revised: July 23, 2012. Available: http://geohazards.usgs.gov/cfusion/qfault/show_report_AB.cfm?fault_id=53§ion_id=c. Accessed: December 5, 2014.
- Bryant, W., and E. Hart. 2007. Special Publication 42 Fault-Rupture Hazard Zones in California, Interim Revision. Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zones1 Maps. California Geological Survey. August. Sacramento, CA. Available: <ftp://ftp.consrv.ca.gov/pub/dmg/pubs/sp/Sp42.pdf>.
- California Division of Mines and Geology. 1985a. *Fault Evaluation Report FER-166, Fresno, Merced, San Benito, and Stanislaus Counties*. By Michael W. Manson. Last revised: April 22, 1985. Available: <http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm>. Accessed: December 4, 2014.
- . 1985b. *Fault Evaluation Report FER-166, Supplement No. 1, Ortigalita Fault (northwest segment), Stanislaus County*. By Earl W. Hart. Last revised: May 17, 1985. Available: <http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm>. Accessed: December 4, 2014.
- . 1986a. *State of California Special Studies Zone, Crevison Peak Quadrangle*. Last revised: July 1, 1986. Available: <http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm>. Accessed: December 4, 2014.
- . 1986b. *State of California Special Studies Zone, Mustang Peak Quadrangle*. Last revised: July 1, 1986. Available: <http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm>. Accessed: December 4, 2014.
- California Geological Survey. 2002. *California Geomorphic Provinces*. Available: http://www.consrv.ca.gov/CGS/information/publications/cgs_notes/note_36/note_36.pdf. Accessed: May 3, 2011.
- . 2007. *Search for Regulatory/Landslide Maps*. Available: <http://www.quake.ca.gov/gmaps/WH/landslidemaps.htm>. Accessed: December 5, 2014.
- . 2008a. *Probabilistic Seismic Hazards Ground Motion Interpolator*. Available: http://www.quake.ca.gov/gmaps/PSHA/psha_interpolator.html. Accessed: December 5, 2014.
- . 2008b. *Guidelines for Evaluating and Mitigating Seismic Hazards in California*. CDMG Special Publication 117a: Sacramento, CA. Available: <http://www.conservation.ca.gov/cgs/shzp/webdocs/Documents/sp117.pdf>. Accessed: December 5, 2014.
- . 2010a. *2010 Fault Activity Map of California*. California Geological Survey, Geologic Data Map No. 6. Compilation and Interpretation by Charles W. Jennings and William A. Bryant. Graphics by: Milind Patel, Ellen Sander, Jim Thompson, Barbara Wanish and Milton Fonseca. Available: <http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html>. Accessed: December 4, 2014.

- . 2010b. 2010 *Geologic Map of California*. California Geological Survey, Geologic Data Map No. 2. Compilation and Interpretation by Charles W. Jennings (1977). Updated version by Carlos Gutierrez, William Bryant, George Saucedo, and Chris Wills. Available: <http://www.quake.ca.gov/gmaps/GMC/stategeologicmap.html>. Accessed: May 4, 2015.
- California Geological Survey and U.S. Geological Survey. 2011. *Susceptibility to Deep-Seated Landslides in California, Map Sheet 58*. Available: <http://www.conservation.ca.gov/cgs/information/publications/ms/Documents/MS58.pdf>. Accessed: December 5, 2014.
- Dundas, R., R. Smith, and K. Verosub. 1996. The Fairmead Landfill Locality (Pleistocene, Irvingtonian), Madera County, California: preliminary report and significance. *PaleoBios* 17(2-4):50-58. Available: <http://www.fresnostate.edu/csm/ees/documents/facstaff/dundas/publication/Dundas%20et%20al-1996.pdf>. Accessed: December 10, 2014.
- Faunt, C. C. (ed.). 2009. Groundwater Availability of the Central Valley Aquifer, California. *U.S. Geological Survey Professional Paper 1766*. Available: http://pubs.usgs.gov/pp/1766/PP_1766.pdf. Accessed: December 5, 2014.
- International Code Council. 2012. 2013 International Building Code. Albany, NY: Delmar Publishers.
- Natural Resources Conservation Service. 2007. *Soil Survey of Stanislaus County, California, Northern Part*. Available: http://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/california/. Accessed: December 16, 2014.
- Norris, R. M., and R. W. Webb. 1990. *Geology of California* (2nd edition). New York, NY: John Wiley & Sons.
- Society of Vertebrate Paleontology. 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Available: <http://vertpaleo.org/PDFS/8f/8fe02e8f-11a9-43b7-9953-cdcfaf4d69e3.pdf>. Accessed: November 29, 2011.
- Stanislaus County. 1994. *General Plan, Chapter III Conservation/Open Space*. Available: <http://www.stancounty.com/planning/pl/gp/gp-sd-chapter3.pdf>. Accessed: December 1, 2014.
- . 2004. *Stanislaus County Local Hazard Mitigation Plan Risk Assessment*. Last revised: September 14, 2004. Available: <http://www.stancounty.com/pdf/HazMatRiskAssessment.pdf>. Accessed: December 5, 2014.
- Stanislaus County Department of Public Works. 2014. *Standards and Specifications, 2014 Edition*. Last revised: July. Available: http://www.stancounty.com/publicworks/pdf/2014_imp_stand.pdf. Accessed: December 3, 2014.
- United States Geological Survey. 2000. *Ground-Water Resources for the Future, Land Subsidence in the United States*. USGS Fact Sheet-165-00. U.S. Geological Survey. Reston, VA. Available: <http://water.usgs.gov/ogw/pubs/fs00165/>.
- . 2013. *EHP Quaternary Faults, Corral Hollow-Carnegie Fault Zone*. Available: <http://geohazards.usgs.gov/qfaults/map.php>. Accessed: December 5, 2014.
- University of California Museum of Paleontology. 2014a. UCMP Specimen Search: Stanislaus County. Available: <http://ucmpdb.berkeley.edu/>. Accessed: December 10, 2014.

- . 2014b. UCMP Advanced Specimen Search: Vertebrates and San Pablo Formation. Available: <http://ucmpdb.berkeley.edu/advanced.html>. Accessed: December 10, 2014.
- . 2014c. UCMP Advanced Specimen Search: Vertebrates and Kreyenhagen Formation. Available: <http://ucmpdb.berkeley.edu/advanced.html>. Accessed: May 7, 2015.
- . 2014d. UCMP Advanced Specimen Search: Vertebrates and Panoche Formation. Available: <http://ucmpdb.berkeley.edu/advanced.html>. Accessed: March 10, 2016.
- . 2014e. UCMP Advanced Specimen Search: Vertebrates and Franciscan. Available: <http://ucmpdb.berkeley.edu/advanced.html>. Accessed: December 10, 2014.
- . 2014f. UCMP Advanced Specimen Search: Vertebrates and Moreno Formation. Available: <http://ucmpdb.berkeley.edu/advanced.html>. Accessed: December 10, 2014.
- . 2014g. UCMP Advanced Specimen Search: Vertebrates, Holocene, and Stanislaus County. Available: <http://ucmpdb.berkeley.edu/advanced.html>. Accessed: December 10, 2014.
- . 2014h. UCMP Advanced Specimen Search: Vertebrates and Modesto Formation. Available: <http://ucmpdb.berkeley.edu/advanced.html>. Accessed: December 10, 2014.
- . 2014i. UCMP Advanced Specimen Search: Vertebrates and Riverbank Formation. Available: <http://ucmpdb.berkeley.edu/advanced.html>. Accessed: December 10, 2014.
- . 2014j. UCMP Advanced Specimen Search: Vertebrates and Fairmead Landfill Locality. Available: <http://ucmpdb.berkeley.edu/advanced.html>. Accessed: December 10, 2014.
- . 2014k. UCMP Advanced Specimen Search: Vertebrates and Ione Formation. Available: <http://ucmpdb.berkeley.edu/advanced.html>. Accessed: December 10, 2014.
- . 2014l. UCMP Advanced Specimen Search: Vertebrates and Mehrten Formation. Available: <http://ucmpdb.berkeley.edu/advanced.html>. Accessed: December 10, 2014.
- U.S. Department of Agriculture. 2006. U.S. Department of Agriculture, Natural Resources Conservation Service. STATSGO GIS Data Set. Available: <http://websoilsurvey.nrcs.usda.gov>.
- Wagner, D. L., E. J. Bortugno, and R. D. McJunkin. 1991. Geologic Map of the San Francisco–San Jose Quadrangle, California (scale 1:250,000). California Department of Conservation, Division of Mines and Geology, Regional Geologic Map Series, Map No. 5A.



**Figure 3.6-1
Geology Map**



Path: K:\Projects_1\County_of_Stanislaus\00203_10_DAO\mapdoc\Fig_Fault_Map_20141216.mxd; User: 282666; Date: 12/16/2014



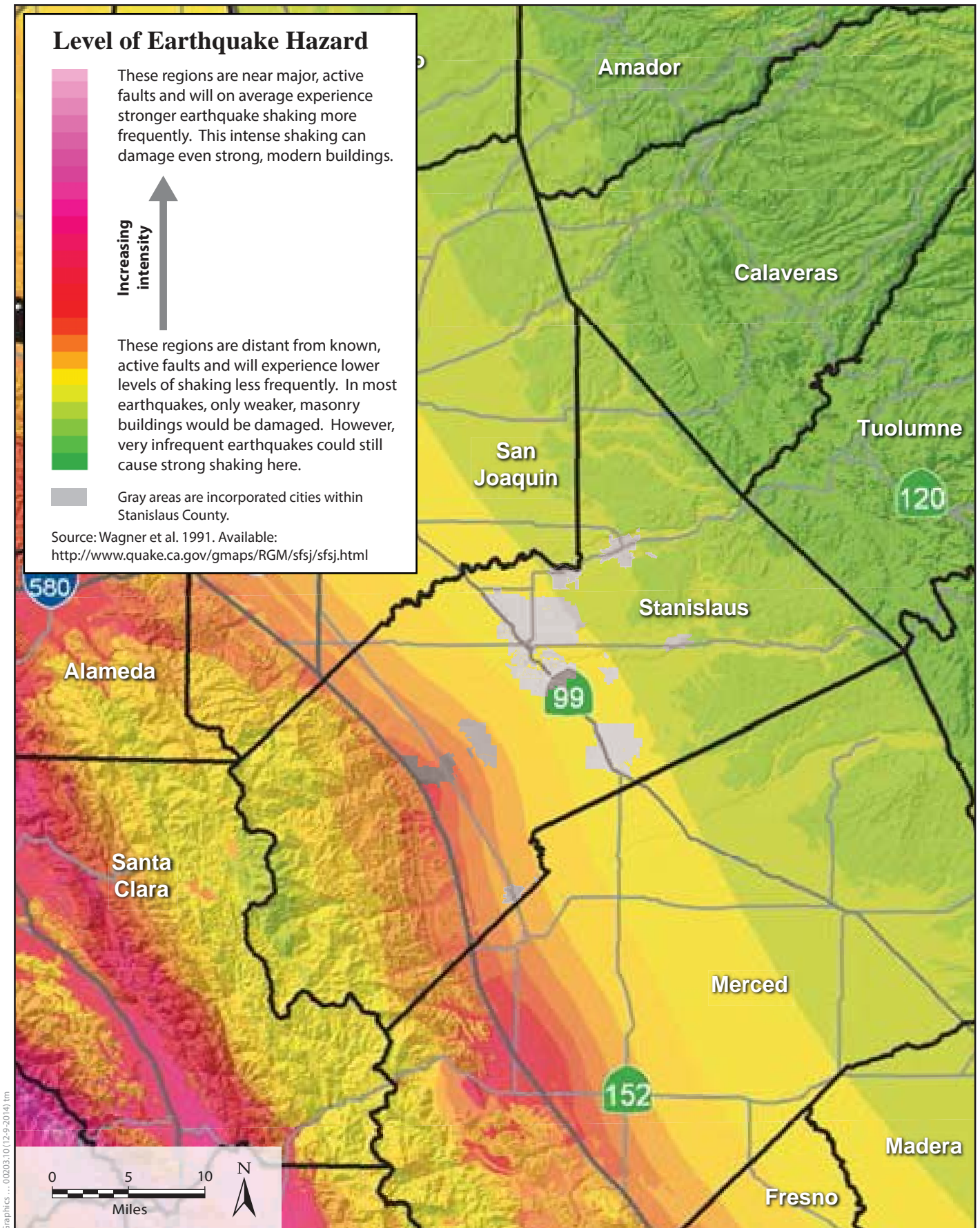


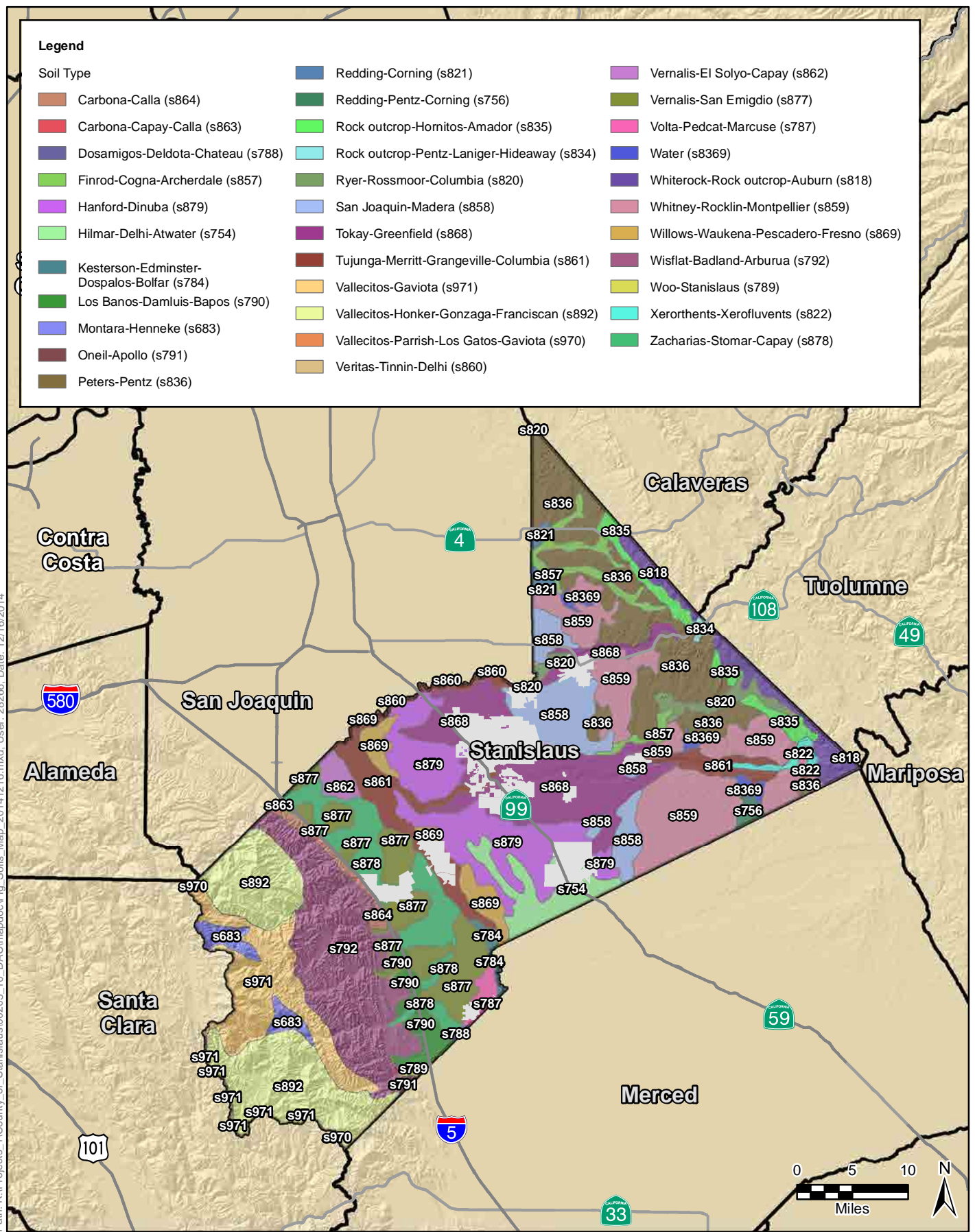
Figure 3.6-3
Ground Shaking Potential

Legend

Soil Type

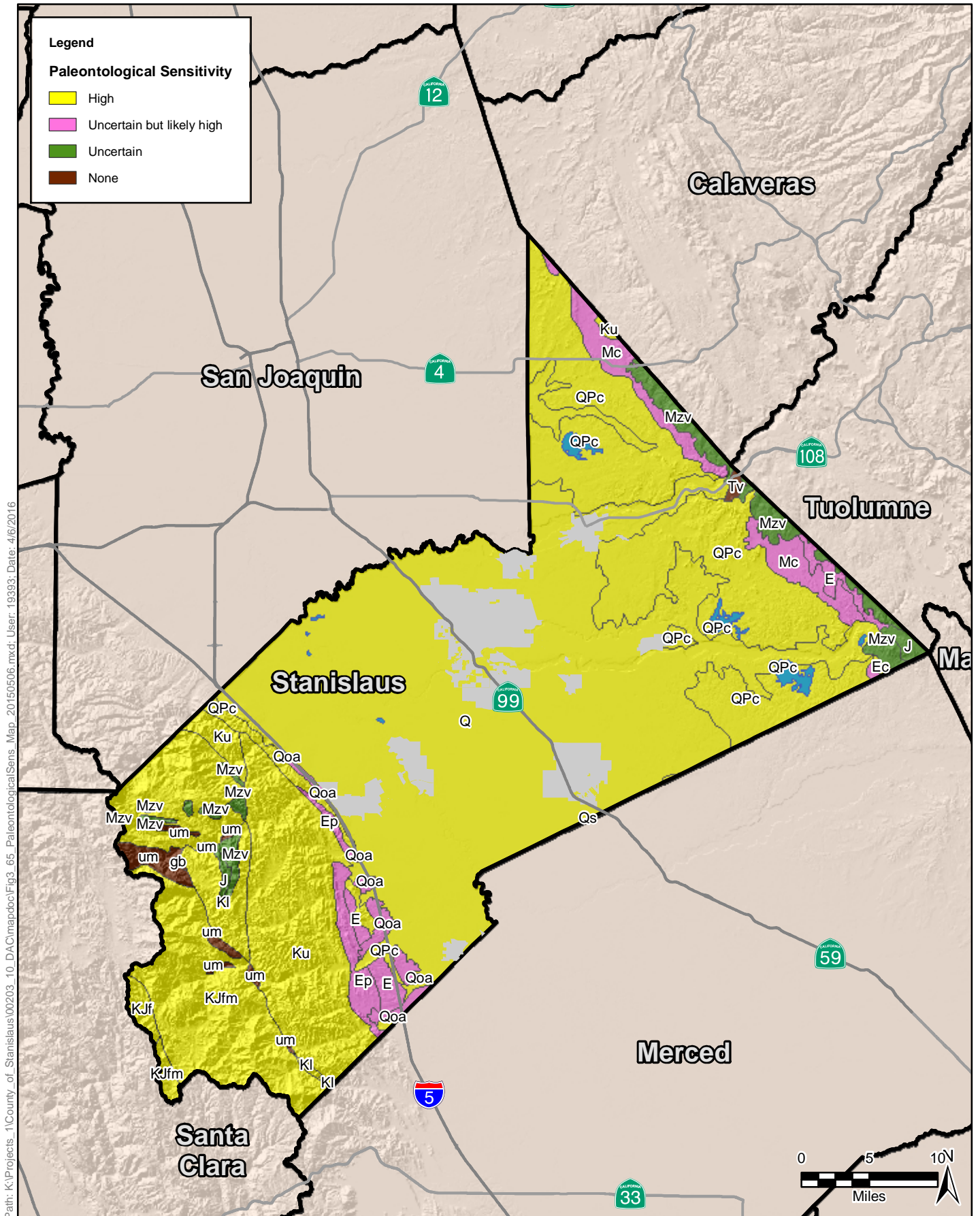
- | | | |
|--|---|---|
| Carbona-Calla (s864) | Redding-Corning (s821) | Vernalis-EI Solyo-Capay (s862) |
| Carbona-Capay-Calla (s863) | Redding-Pentz-Corning (s756) | Vernalis-San Emigdio (s877) |
| Dosamigos-Deldota-Chateau (s788) | Rock outcrop-Hornitos-Amador (s835) | Volta-Pedcat-Marcuse (s787) |
| Finrod-Cogna-Archerdale (s857) | Rock outcrop-Pentz-Laniger-Hideaway (s834) | Water (s8369) |
| Hanford-Dinuba (s879) | Ryer-Rossmoor-Columbia (s820) | Whiterock-Rock outcrop-Auburn (s818) |
| Hilmar-Delhi-Atwater (s754) | San Joaquin-Madera (s858) | Whitney-Rocklin-Montpellier (s859) |
| Kesterson-Edminster-Dospalos-Bolfar (s784) | Tokay-Greenfield (s868) | Willows-Waukena-Pescadero-Fresno (s869) |
| Los Banos-Damluis-Bapos (s790) | Tujunga-Merritt-Grangeville-Columbia (s861) | Wisflat-Badland-Arburua (s792) |
| Montara-Henneke (s683) | Vallecitos-Gaviota (s971) | Woo-Stanislaus (s789) |
| Oneil-Apollo (s791) | Vallecitos-Honker-Gonzaga-Franciscan (s892) | Xerorthents-Xerofluvents (s822) |
| Peters-Pentz (s836) | Vallecitos-Parrish-Los Gatos-Gaviota (s970) | Zacharias-Stomar-Capay (s878) |
| | Veritas-Tinnin-Delhi (s860) | |

Path: K:\Projects_1\County_of_Stanislaus\0203_10_DAO\mapdoc\Fig_Soils_Map_20141216.mxd; User: 28266; Date: 12/16/2014



Source: STATSGO; ESRI USA Imagery (2010)





Path: K:\Projects_1\County_of_Stanislaus\00203_10_DAC\mapdoc\Fig3_65_PaleontologicalSens_Map_20150506.mxd; User: 19393; Date: 4/6/2016

Source: California Geological Survey 2010



Figure 3.6-5
General Paleontological Sensitivity Map
of Stanislaus County

3.7 Greenhouse Gas Emissions and Energy

3.7.1 Introduction

This section discusses the impacts of the plan updates with respect to greenhouse gas emissions and energy. It lists the thresholds of significance that form the basis of the environmental analysis, describes the greenhouse gas emissions and energy study area and major sources used in the analysis, provides environmental setting information that is relevant to greenhouse gas emissions and energy, and assesses whether the plan updates would result in significant impacts with respect to these resources.

The phenomenon known as the greenhouse effect keeps the atmosphere near the Earth's surface warm enough for the successful habitation of humans and other life forms. Present in the Earth's lower atmosphere, greenhouse gases (GHGs) play a critical role in maintaining the Earth's temperature; GHGs trap some of the long-wave infrared radiation emitted from the Earth's surface that would otherwise escape to space. According to Assembly Bill (AB) 32, California's Global Warming Solutions Act, GHGs include the following gases: carbon dioxide (CO₂), methane (CH₄), nitrogen dioxide (N₂O), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and hydrofluorocarbons (HFCs). State CEQA Guidelines Section 15364.5 also identifies these six gases as GHGs.

Sunlight passes through the atmosphere as infrared, visible, and ultraviolet light. Some of the sunlight striking the Earth is absorbed and converted to heat, which warms the surface. The surface emits infrared radiation to the atmosphere, where some of it is absorbed by GHGs and re-emitted toward the surface; some of the heat is not trapped by GHGs and escapes into space. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and amplifying the warming of the Earth. (Center for Climate and Energy Solutions 2011.)

Increases in fossil fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere since the Industrial Revolution. Rising atmospheric concentrations of GHGs in excess of natural levels enhance the greenhouse effect, which contributes to global warming of the Earth's lower atmosphere and induces large-scale changes in ocean circulation patterns, precipitation patterns, global ice cover, biological distributions, and other changes to the Earth system that are collectively referred to as *climate change*.

The Intergovernmental Panel on Climate Change (IPCC) has been established by the World Meteorological Organization and United Nations Environment Programme to assess scientific, technical, and socioeconomic information relevant to the understanding of climate change, its potential impacts, and options for adaptation and mitigation. The IPCC estimates that the average global temperature rise between the years 2000 and 2100 could range from 1.1° Celsius, with no increase in GHG emissions above year 2000 levels, to 6.4° Celsius, with substantial increase in GHG emissions (Intergovernmental Panel on Climate Change 2007a:97-115). Large increases in global temperatures could have substantial adverse effects on the natural and human environments on the planet and in California.

Study Area

The greenhouse gas emissions and energy impact study area for the project is defined as Stanislaus County.

3.7.2 Environmental Setting

This section describes the federal, state, and local regulations and policies that are applicable to the plan updates, and the existing conditions pertaining to greenhouse gas emissions and energy in the study area. The existing conditions will constitute the baseline for analyses.

Regulatory Setting

This section describes the federal, state, and local regulations and policies pertaining to greenhouse gas emissions and energy that would apply to the plan updates.

Greenhouse Gas Emissions

Federal

Mandatory Greenhouse Gas Reporting Rule (2009)

On September 22, 2009, the U.S. Environmental Protection Agency (EPA) released its final Greenhouse Gas Reporting Rule (Reporting Rule). The Reporting Rule is a response to the fiscal year 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161), which required EPA to develop “mandatory reporting of greenhouse gases above appropriate thresholds in all sectors of the economy....” The Reporting Rule applies to most entities that emit 25,000 metric tons of carbon dioxide equivalent (CO₂e) or more per year. Starting in 2010, facility owners are required to submit an annual GHG emissions report with detailed calculations of facility GHG emissions. The Reporting Rule also mandates recordkeeping and administrative requirements in order for EPA to verify annual GHG emissions reports.

Update to Corporate Average Fuel Economy Standards (2009)

The new Corporate Average Fuel Economy (CAFE) standards incorporate stricter fuel economy standards promulgated by the State of California into one uniform standard. Additionally, automakers are required to cut GHG emissions in new vehicles by roughly 25% by 2016. EPA, the National Highway Traffic Safety Administration (NHTSA), and the California Air Resources Board (ARB) are currently working together on a joint rulemaking to establish GHG emissions standards for 2017 to 2025 model year passenger vehicles, which require an industry-wide average of 54.5 miles per gallon in 2025 (U.S. Environmental Protection Agency et al. 2011a). The official proposal was released by both EPA and NHTSA on December 1, 2011. On August 28, 2012, EPA and NHTSA issued a joint Final Rulemaking to extend the national program of harmonized greenhouse gas and fuel economy standards to model year 2017 through 2025 passenger vehicles.

Environmental Protection Agency Endangerment and Cause and Contribute Findings (2009)

On December 7, 2009, EPA signed the Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the federal Clean Air Act. Under the Endangerment Finding, EPA finds that the current and projected concentrations of the six key well-mixed GHGs—CO₂, CH₄, N₂O, PFCs, SF₆, and HFCs—in the atmosphere threaten the public health and welfare of current and

future generations. Under the Cause or Contribute Finding, EPA finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing EPA's proposed new CAFE standards for light-duty vehicles, which EPA proposed in a joint proposal including the Department of Transportation's proposed CAFE standards.

State

Executive Order S-3-05 (2005)

Signed by Governor Arnold Schwarzenegger on June 1, 2005, Executive Order (EO) S-3-05 asserts that California is vulnerable to the effects of climate change. To combat this concern, EO S-3-05 established the following GHG emissions reduction targets for state agencies.

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.

Executive orders are binding only on state agencies. Accordingly, EO S-3-05 will guide state agencies' efforts to control and regulate GHG emissions but will have no direct binding effect on local government or private actions. The Secretary of the California Environmental Protection Agency is required to report to the Governor and state legislature biannually on the impacts of global warming on California, mitigation and adaptation plans, and progress made toward reducing GHG emissions to meet the targets established in this executive order.

Assembly Bill 32, California Global Warming Solutions Act (2006)

In September 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006. AB 32 establishes a cap on statewide GHG emissions and sets forth the regulatory framework to achieve the corresponding reduction in statewide emission levels. Under AB 32, ARB is required to take the following actions.

- Adopt early action measures to reduce GHGs.
- Establish a statewide GHG emissions cap for 2020 based on 1990 emissions.
- Adopt mandatory reporting rules for significant GHG sources.
- Adopt a scoping plan indicating how emission reductions would be achieved through regulations, market mechanisms, and other actions.
- Adopt regulations needed to achieve the maximum technologically feasible and cost-effective reductions in GHGs.

Climate Change Scoping Plan (2012)

On December 11, 2008, pursuant to AB 32, ARB adopted the Climate Change Scoping Plan. This plan outlines how emissions reductions from significant sources of GHGs will be achieved via regulations, market mechanisms, and other actions. Six key elements are identified to achieve emissions reduction targets.

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards.
- Achieving a statewide renewable energy mix of 33%.
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system.
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets.
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard (LCFS).
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the state's long-term commitment to AB 32 implementation.

The Climate Change Scoping Plan also describes recommended measures that were developed to reduce GHG emissions from key sources and activities while improving public health, promoting a cleaner environment, preserving our natural resources, and ensuring that the impacts of the reductions are equitable and do not disproportionately affect low-income and minority communities. These measures put the state on a path to meet the long-term 2050 goal of reducing California's GHG emissions to 80% below 1990 levels.

In March 2011, a San Francisco Superior Court enjoined the implementation of ARB's Scoping Plan, finding the alternatives analysis and public review process violated both CEQA and ARB's certified regulatory program (*Association of Irrigated Residents, et al. v. California Air Resources Board*). In response to this litigation, ARB adopted a *Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document* on August 24, 2011. ARB staff re-evaluated the statewide GHG baseline in light of the economic downturn and updated the projected 2020 emissions to 507 million metric tons CO₂e. Two reduction measures (Pavley I and the Renewable Portfolio Standard), not previously included in the 2008 Scoping Plan baseline, were incorporated into the updated baseline. According to the *Final Supplement*, the majority of additional measures in the Climate Change Scoping Plan have been adopted (as of 2012) and are currently in place (California Air Resources Board 2011).

Senate Bill 97 (2007)

Senate Bill (SB) 97 required the California Office of Planning and Research to develop, and the Natural Resources Agency to adopt, amendments to the State CEQA Guidelines addressing the analysis and mitigation of GHG emissions. These amendments were enacted in 2010.

Senate Bill 375—Sustainable Communities Strategy (2008)

SB 375 provides for a new planning process that coordinates land use planning, regional transportation plans, and funding priorities in order to help California meet the GHG reduction goals established in AB 32. SB 375 requires regional transportation plans, developed by metropolitan planning organizations (MPOs) to incorporate a "sustainable communities strategy" (SCS) in their Regional Transportation Plans (RTPs). The goal of the SCS is to reduce regional vehicle miles traveled (VMT) through land use planning and consequent transportation patterns. ARB released the regional targets in September 2010, and Stanislaus Area Council of Governments' (StanCOG's) regional

reduction targets are a 5% per capita reduction in GHG emissions by 2020 and 10% reduction by 2035. StanCOG is the MPO for Stanislaus County.

STANCOG adopted its SB 375-compliant *2014 Regional Transportation Plan/Sustainable Communities Strategy* in June 2014. StanCOG's 2014 RTP/SCS indicates they will exceed their 5% 2020 reduction target and 10% 2035 reduction target, achieving a 26% reduction in 2020 and 22% reduction in 2030 (Stanislaus Area Council of Governments 2014). The "Moderate Change" scenario that makes up the SCS largely reflects the land uses identified in the County General Plan for its unincorporated areas, with development at higher density and intensity than in the city general plans proposed for portions of the cities.

SB 375 also includes provisions for streamlined CEQA review for some infill projects such as transit-oriented development. However, there are no areas within unincorporated Stanislaus County with high quality transit service to qualify for transit-oriented development streamlining. Therefore, this aspect of the statute does not apply to the County.

State CEQA Guidelines

The State CEQA Guidelines require lead agencies to describe, calculate, or estimate the amount of GHG emissions that would result from a project. Moreover, the State CEQA Guidelines emphasize the necessity to determine potential climate change effects of the project and propose mitigation as necessary. The State CEQA Guidelines confirm the discretion of lead agencies to determine appropriate significance thresholds, but require the preparation of an EIR if "there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with adopted regulations or requirements" (Section 15064.4).

State CEQA Guidelines Section 15126.4 includes considerations for lead agencies related to feasible mitigation measures to reduce GHG emissions, which may include, among others, measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision; implementation of project features, project design, or other measures that are incorporated into the project to substantially reduce energy consumption or GHG emissions; offsite measures, including offsets that are not otherwise required, to mitigate a project's emissions; and measures that sequester carbon or carbon-equivalent emissions.

Pertinent Case Law

The California Supreme Court has held that the Scoping Plan's statewide goal of reducing GHG emissions by 29% from business as usual in order to meet AB 32's target can be used as a threshold of significance for GHG emissions (*Center for Biological Diversity v. Department of Fish and Wildlife* (2015) __ Cal.4th __) (hereafter *Newhall Ranch*). However, if applied to a local project, the EIR must provide supporting evidence that the project emissions relate to the Scoping Plan. The Court stated, in overturning the application of the Scoping Plan goal to an individual project:

At bottom, the EIR's deficiency stems from taking a quantitative comparison method developed by the Scoping Plan as a measure of the greenhouse gas emissions reduction effort required by the state as a whole, and attempting to use that method, without consideration of any changes or adjustments, for a purpose very different from its original design: To measure the efficiency and conservation measures incorporated in a specific land use development proposed for a specific location.

California Energy Efficiency Standards for Residential and Nonresidential Buildings—Green Building Code (2011), Title 24 Update (2014)

California has adopted aggressive energy efficiency standards for new buildings and has been continually updating them for many years. In 2008, the California Building Standards Commission adopted the nation's first green building standards, which include standards for many other built environment aspects apart from energy efficiency. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code (24 California Code of Regulations [CCR]). Part 11 establishes voluntary standards that became mandatory in the 2010 edition of the code, including planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The current energy efficiency standards were last adopted in 2013 and took effect on January 1, 2014.

Executive Order B-30-15 (2015)

EO B-30-15 established a medium-term goal for 2030 of reducing GHG emissions by 40% below 1990 levels and requires ARB to update its current AB 32 Scoping Plan to identify the measures to meet the 2030 target. The executive order supports EO S-03-05, described above, but is currently only binding on state agencies. However, there are current (2015/2016) proposals (Senate Bill [SB] 32) at the state legislature to establish a statutory target for 2030.

Senate Bill 350—De Leon (Clean Energy and Pollution Reduction Act of 2015 – Ch. 547, Stats. of 2015)

Senate Bill 350 was approved by the California legislature in September 2015 and signed by Governor Brown in October 2015. Its key provisions are to require the following by 2030: (1) a renewables portfolio standard of 50% and (2) a doubling of energy efficiency (electrical and natural gas) by 2030, including improvements to the efficiency of existing buildings. These mandates will be implemented by future actions of the Public Utilities Commission and California Energy Commission.

Energy**Federal*****Energy Policy Act of 2005***

The Energy Policy Act of 2005 (EP Act) was intended to establish a comprehensive, long-term energy policy and is implemented by the U.S. Department of Energy (U.S. DOE). The EP Act addresses energy production in the United States, including oil, gas, coal, and alternative forms of energy and energy efficiency and tax incentives. Energy efficiency and tax incentive programs include credits for the construction of new energy efficient homes, production or purchase of energy efficient appliances, and loan guarantees for entities that develop or use innovative technologies that avoid the production of greenhouse gases.

State***California Environmental Quality Act, Appendix F, Energy Conservation***

CEQA requires EIRs to include a discussion of potential energy impacts and energy conservation measures. Appendix F, *Energy Conservation*, of the State CEQA Guidelines outlines energy impact

possibilities and potential conservation measures designed to assist in the evaluation of potential energy impacts of proposed projects. Appendix F places “particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy,” and further indicates this may result in an unavoidable adverse effect on energy conservation. Moreover, the State CEQA Guidelines state that significant energy impacts should be “considered in an EIR to the extent relevant and applicable to the project.” Mitigation for potential significant energy impacts could include implementing a variety of strategies, such as measures to reduce wasteful energy consumption and altering project siting to reduce energy consumption.

California Building Standards Code (Title 24, California Code of Regulations), including Energy Code (Title 24, Part 6) and Green Building Standards Code (Title 24, Part 11)

California first adopted the California Buildings Standards Code in 1979, which constituted the nation’s first comprehensive energy conservation requirements for construction. Since this time, the standards have been continually revised and strengthened. In particular, the California Building Standards Commission adopted the mandatory Green Building Standards Code (CALGreen [California Code of Regulations, Title 24, Part 11]) in January 2010. CALGreen applies to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure.

California Code of Regulations, Title 24, Part 6 (also known as the California Energy Code) and associated regulations in CALGreen were revised again in 2013 by the California Energy Commission (CEC). The 2013 Building Energy Efficiency Standards are 25% more efficient than previous standards for residential construction. Part 11 also establishes voluntary standards that became mandatory in the 2010 edition of the code, including planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The standards offer builders better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses. The next update to the Title 24 energy efficiency standards will occur in 2016 and take effect in 2017. Senate Bill 350, described above, will require future updates to include tighter energy conservation standards.

Senate Bills 1078/107 and Senate Bill 2—Renewables Portfolio Standard

SB 1078 and SB 107, California’s Renewables Portfolio Standard (RPS), obligated investor-owned utilities (IOUs), energy service providers (ESPs), and Community Choice Aggregations (CCAs) to procure an additional 1% of retail sales per year from eligible renewable sources until 20% is reached, no later than 2010. The California Public Utilities Commission (CPUC) and CEC are jointly responsible for implementing the program. SB 2 (2011) set forth a longer range target of procuring 33% of retail sales by 2020. Implementation of the RPS will conserve nonrenewable fossil fuel resources by generated a greater percentages of statewide electricity from renewable resources, such as wind, solar, and hydropower.

Assembly Bill 1881 (Ch. 559, Stats. of 2006)

Water conservation reduces energy use by reducing the energy cost of moving water from its source to its user. AB 1881 (Chapter 559, Statutes of 2006) required the Department of Water Resources (DWR) to adopt an Updated Model Water Efficient Landscape Ordinance (MWELO) and local agencies to adopt DWR’s MWELO or a local water efficient landscape ordinance by January 1, 2010, and notify DWR of their adoption (Government Code Section 65595). If a jurisdiction does not adopt a MWELO

or local water efficient landscape ordinance, the standards defer to the California Model Water Ordinance, which was updated in September 2015.

Senate Bill X7-7 (Ch. 4, Stats. of 2009)

SB X7-7, the Water Conservation Act of 2009, establishes an overall goal of reducing statewide per capita urban water use by 20% by December 31, 2020 (with an interim goal of at least 10% by December 31, 2015). Reducing water use results in a reduction in energy demand that would otherwise be used to transport and treat water before delivery to the consumer. This statute applies to the following water districts located within Stanislaus County: Central California Irrigation District, Del Puerto Water District, Eastin Water District, Eastside Water District, El Solyo Water District, Modesto Irrigation District, Oak Flat Water District, Oakdale Irrigation District, Patterson Irrigation District, Rock Creek Water District, Turlock Irrigation District, and West Stanislaus Irrigation District, Western Hills Water District.

Assembly Bill 2076, Reducing Dependence on Petroleum

The CEC and ARB are directed by AB 2076 (passed in 2000) to develop and adopt recommendations for reducing dependence on petroleum. A performance-based goal is to reduce petroleum demand to 15% less than 2003 demand by 2020.

Assembly Bill 1493—Pavley Rules (2002, Amendments 2009, 2012 rule-making)

AB 1493 required ARB to adopt vehicle standards that will improve the efficiency of light duty autos and lower GHG emissions to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards (referred to previously as “Pavley II,” now referred to as the “Advanced Clean Cars” measure) has been proposed for vehicle model years 2017–2025. Together, the two standards are expected to increase average fuel economy to roughly 54.5 miles per gallon by 2025. The improved energy efficiency of light duty autos will reduce statewide fuel consumption in the transportation sector.

Senate Bill 350 (Ch. 547, Stats. of 2015)

The “Clean Energy and Pollution Reduction Act of 2015” is summarized above.

Local

Stanislaus County Code

16.65.010 California Energy Code and Appendices adopted. The California Energy Code, as published by the International Code Council, 2013 Edition, and Appendix 1-A is adopted by reference and incorporated in this chapter as if fully set forth herein, and shall be referred to as the Energy Code of the county.

16.80.010 California Green Building Standards Code adopted (see discussion above under *Greenhouse Gas Emissions*).

16.70.010 California Residential Code and Appendices adopted. Except as hereafter changed or modified, the California Residential Code, as published by the International Code Council, 2013 Edition, Chapter 1, Division II Administration Sections R105.2 and Section R109.1 through R109.1.6.2 except R109.1.2, Appendix “H” “Patio Covers” are adopted by reference and incorporated in this Chapter 16.70 as if fully set forth herein, and shall be referred to as the California Residential Code of the county.

Stanislaus County General Plan Chapter 1 – Land Use Element

GOAL THREE. Foster stable economic growth through appropriate land use policies.

POLICY SEVENTEEN. Promote diversification and growth of the local economy.

IMPLEMENTATION MEASURE

4. Encourage the development of new industries and the retention of existing industries that help the community reduce, recycle, and/or reuse waste that would otherwise require disposal.

GOAL FOUR. Ensure that an effective level of public service is provided in unincorporated areas.

POLICY TWENTY-TWO. 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.

IMPLEMENTATION MEASURE

7. Only development requests which have recognized and mitigated any significant impacts on solid waste reduction, recycling, disposal, reuse, collection, handling, and removal shall be approved.

POLICY TWENTY-THREE. New development shall pay its fair share of the cost of cumulative impacts on circulation and transit systems.

IMPLEMENTATION MEASURES

2. Traffic impacts shall be identified and impact mitigation fees shall be paid by the subdivider and/or developer
3. The level of service (LOS) for all roadways and intersections shall be at least a "C" level, unless they are located within the sphere of influence of a city that has adopted a lower level of service.

Denair Community Plan

Like the general County policies, the Denair Community Plan Area portion of the Land Use Element contains several goals and policies pertaining indirectly to air quality. The following policies directly pertain to air quality resources in Denair.

GOAL THREE. Provide for the non-motorized transportation needs of the Denair Community

POLICY ONE. Provide safe and convenient pedestrian and bicycle facilities to various destinations throughout the Community of Denair.

POLICY TWO. Provide pedestrian and bicycle facilities that link community residents to schools, parks, civic facilities and the community's downtown core in accordance with the Denair Community Plan diagram.

POLICY THREE. The Community pedestrian and bicycle facilities shall connect to regional pedestrian and bicycle facilities.

Keyes Community Plan

Like the countywide policies, the Keyes Community Plan Area portion of the Land Use Element contains goals and policies that indirectly relate to air quality. The following policies directly pertain to air quality resources in Keyes.

GOAL THREE (Community of Keyes). Encourage attractive and orderly development which preserves a small town atmosphere.

POLICY SIX. Provide convenient and accessible neighborhood commercial areas within the community to minimize vehicular trips needed for frequently used retail services.

GOAL SIX (Community of Keyes). Provide for the non-motorized transportation needs of the Keyes Community

POLICY ONE. Provide safe and convenient pedestrian and bicycle facilities to various destinations throughout the Community of Keyes.

POLICY TWO. Provide pedestrian and bicycle facilities that link community residents to schools, parks, civic facilities and the community's retail centers in accordance with the Keyes Community Plan diagram.

POLICY THREE. Community bicycle facilities shall connect to regional bicycle facilities.

Stanislaus County General Plan Chapter 3 – Conservation/Open Space Element

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

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.

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.

GOAL ELEVEN. Conserve resources through promotion of waste reduction, reuse, recycling, composting, ride-share 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.

POLICY THIRTY-TWO. New construction by the County shall meet or exceed code requirement for energy conservation.

Stanislaus County General Plan Chapter 6 – 2009-2014 Housing Element

GOAL ONE. Encourage the provision of adequate, affordable housing, including units for rent and for ownership for residents of all income groups, including extremely-low, very low-, low- and moderate-income households.

POLICY ONE D. The County shall encourage energy conservation in existing homes and new housing developments.

Existing Conditions

Greenhouse Gases of Concern

The primary GHGs of concern are CO₂, CH₄, N₂O, HFCs, and SF₆. Each of these gases is discussed in detail below.

To simplify reporting and analysis, methods have been set forth to describe emissions of GHGs in terms of a single gas. The global warming potential (GWP) methodology defined in the IPCC reference documents (Intergovernmental Panel on Climate Change 1996, 2001:241–280) is the most commonly accepted method to compare GHG emissions. The IPCC defines the GWP of various GHG emissions on

a normalized scale that recasts all GHG emissions in terms of CO₂e, which compares the gas in question to that of the same mass of CO₂ (CO₂ has a GWP of 1 by definition).

Table 3.7-1 lists the GWP of CO₂, CH₄, N₂O, HCFs, and SF₆; their lifetimes; and abundances in the atmosphere.

Table 3.7-1. Abundances, Lifetimes, and Global Warming Potentials of Primary Greenhouse Gases

Greenhouse Gas	Current Atmospheric Abundance	Lifetime (years)	Global Warming Potential (100 years)
CO ₂ (ppm)	394	50-200	1
CH ₄ (ppb)	1,893	9-15	28
N ₂ O (ppb)	326	121	265
HFC-23 (ppt)	18	222	12,400
HFC-134a (ppt)	75	13.4	1,300
HFC-152a (ppt)	3.9	1.5	138
SF ₆ (ppt)	7.8	3,200	23,500

Sources: Myhre et al. 2013; Blasing 2014; National Oceanic and Atmospheric Administration 2014.
 ppm = parts per million.
 ppb = parts per billion.
 ppt = parts per trillion.

Carbon Dioxide

CO₂ is the most important anthropogenic GHG, accounting for more than 75% of all GHG emissions caused by humans. Its atmospheric lifetime of 50–200 years ensures that atmospheric concentrations of CO₂ will remain elevated for decades even after mitigation efforts to reduce GHG concentrations are promulgated (Intergovernmental Panel on Climate Change 2007a). The primary sources of anthropogenic CO₂ in the atmosphere are the burning of fossil fuels (including motor vehicles), gas flaring, cement production, and land use changes (e.g., deforestation, oxidation of elemental carbon). CO₂ can also be removed from the atmosphere by photosynthetic organisms.

Atmospheric CO₂ has increased from a pre-industrial age concentration of 280 parts per million (ppm) to 394 ppm in 2014 (Intergovernmental Panel on Climate Change 2007b; National Oceanic and Atmospheric Administration 2014).

Methane

CH₄, the main component of natural gas, is the second most abundant GHG (Intergovernmental Panel on Climate Change 1996). Sources of anthropogenic emissions of CH₄ include growing rice, raising cattle, using natural gas, landfill outgassing, and mining coal (National Oceanic and Atmospheric Administration 2005). Certain land uses also function as both a source of CH₄ and sink (i.e., they remove CH₄ from the atmosphere). For example, the primary terrestrial source of CH₄ is wetlands; however, when undisturbed, aerobic soil acts as a CH₄ sink.

Atmospheric CH₄ has increased from a pre-industrial concentration of 715 parts per billion (ppb) to 1,893 ppb in 2014 (Intergovernmental Panel on Climate Change 2007b; Blasing 2014).

Nitrous Oxide

N₂O is a powerful GHG, with a GWP of 310 (Intergovernmental Panel on Climate Change 1996). Anthropogenic sources of N₂O include agricultural processes (e.g., fertilizer application), nylon production, fuel-fired power plants, nitric acid production, and vehicle emissions. N₂O also is used in rocket engines, racecars, and as an aerosol spray propellant. Natural processes, such as nitrification and denitrification, can also produce N₂O, which can be released to the atmosphere by diffusion. In the United States more than 70% of N₂O emissions are related to agricultural soil management practices, particularly fertilizer application.

N₂O concentrations in the atmosphere have increased 18% from pre-industrial levels of 270 ppb to 326 ppb in 2014 (Intergovernmental Panel on Climate Change 2007b; Blasing 2014).

Hydrofluorocarbons

HFCs are anthropogenic chemicals used in commercial, industrial, and consumer products and have high GWPs (U.S. Environmental Protection Agency 2015). HFCs are generally used as substitutes for ozone-depleting substances (ODS) in automobile air conditioners and refrigerants. Within the transportation sector, HFCs from leaking air conditioning units represent about 3% of total onroad emissions (United States Environmental Protection Agency 2007). As seen in Table 3.7-1, the most abundant HFCs, in descending order, are HFC-134a, HFC-23, and HFC-152a.

As of December 2013, HCF concentrations in the atmosphere have risen from 0 parts per trillion (ppt) to over 75 (ppt) (HFC-134a) since pre-industrial times (Intergovernmental Panel on Climate Change 2007b; Carbon Dioxide Information Analysis Center 2014).

Sulfur Hexafluoride

SF₆, a human-made chemical, is used as an electrical insulating fluid for power distribution equipment, in the magnesium industry, in semiconductor manufacturing, and also as a tracer chemical for the study of oceanic and atmospheric processes (U.S. Environmental Protection Agency 2015). In 2014, atmospheric concentrations of SF₆ were 7.8 ppt and steadily increasing in the atmosphere (Blasing 2014). SF₆ is the most powerful of all GHGs listed in IPCC studies, with a GWP of 23,500 (Myhre et al. 2013).

Greenhouse Gas Emissions Inventories

A GHG inventory is a quantification of all GHG emissions and sinks within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (i.e., for global and national entities) or on a small scale (i.e., for a particular building or person). Although many processes are difficult to evaluate, several agencies have developed tools to quantify emissions from certain sources.

The Stanislaus Regional GHG Inventory Project was completed by ICF International as part of the *Stanislaus County Regional Sustainability Toolbox (RST)*, a group of initiatives funded through the State of California Strategic Growth Council (SGC). The proposal was submitted collaboratively by Stanislaus County (lead jurisdiction), and the Cities of Ceres, Hughson, Modesto, Newman, Oakdale, Patterson, Riverbank, Turlock and Waterford. This report provides the quantification (in terms of carbon dioxide equivalent [CO₂e]) of GHG community emissions for the county as a whole for the year 2005, and is included as Appendix D (ICF International 2013).

Table 3.7-2 outlines the most recent global, national, statewide, and local GHG inventories to help contextualize the magnitude of potential project-related emissions.

Table 3.7-2. Global, National, State, and Local GHG Emissions Inventories

Emissions Inventory	CO ₂ e (metric tons)
2004 IPCC Global GHG Emissions Inventory	49,000,000,000
2012 EPA National GHG Emissions Inventory	6,526,000,000
2012 ARB State GHG Emissions Inventory	458,680,000
2005 Stanislaus Countywide Regional Community GHG Emissions Inventory	6,044,113

Sources: Intergovernmental Panel on Climate Change 2007a; U.S. Environmental Protection Agency 2014a; California Air Resources Board 2014a; ICF International 2013.

Energy

California has a diverse portfolio of energy resources. Excluding offshore areas, the state ranked third in the nation in crude oil production in 2013, producing more than 16,950 barrels (equivalent to 1,143.8 trillion British thermal units [BTU]). The state also ranked fourth in the nation in conventional hydroelectric generation and second in the nation for net electricity generation from renewable resources, including geothermal, solar, and wind. Other energy sources in the state include natural gas, nuclear, and biofuels (U.S. Energy Information Administration 2014).

Energy efficiency efforts have dramatically reduced statewide per capita energy consumption relative to historical averages. According to the U.S. Energy Information Administration (2014), California consumed approximately 7,612 trillion BTUs of energy in 2012. Per capita energy consumption (i.e., total energy consumption divided by the population) in California is among the lowest in the country, with 201 million BTU in 2012, which ranked 49th among all states in the country. Natural gas accounted for the majority of energy consumption (32%), followed by motor gasoline (22%), distillate and jet fuel (14%), interstate electricity (11%), nuclear and hydroelectric power (6%), and a variety of other sources (U.S. Energy Information Administration 2014). The transportation sector consumed the highest quantity of energy (38.5%), followed by the industrial and commercial sectors.

Per capita energy consumption, in general, is declining due to improvements in energy efficiency and design. However, despite this reduction in per capita energy use, the state's total overall energy consumption (i.e., non-per capita energy consumption) is expected to increase over the next several decades due to growth in population, jobs, and demand for vehicle travel. Electricity usage is anticipated to grow about 26% over the next two decades, and diesel fuel consumption may increase by 35 to 42% over the same time period. Gasoline usage, however, is expected to decrease by 8.5 to 11.3%. This decrease would largely be a result of high fuel prices, efficiency gains, and competing fuel technologies (U.S. Energy Information Administration 2013).

Stanislaus County is served by three energy providers: Pacific Gas and Electric (PG&E), Modesto Irrigation District, and Turlock Irrigation District. Regionally, PG&E has a diverse power production portfolio, which is comprised of a variety of renewable (such as wind, solar, and hydroelectric) and non-renewable (such as natural gas) sources. On a smaller scale, Modesto Irrigation District, and Turlock Irrigation District also rely on a diverse portfolio of energy sources to serve their customers. Energy production typically varies by season and by year depending on hydrologic conditions. Regional electricity loads also tend to be higher in the summer because the higher summer temperatures drive increased demand for air-conditioning. In contrast, natural gas loads are higher in the winter because the colder temperatures drive increased demand for natural gas heating.

At the local level, Stanislaus County consumes a small amount of energy relative to the state. Electricity and natural gas usage is approximately 1.7 and 1.4% of the statewide total, respectively (California Energy Commission 2014). Gasoline is about 1.2% of statewide usage (California Department of Transportation 2009). For reference, Stanislaus County is home to about 1.4% of California residents. See Section 3.10, *Land Use and Planning*, for additional information on Stanislaus County. Building electricity and natural gas usage accounts for 23 and 16% of total CO₂e emissions for Stanislaus County, respectively (ICF International 2013).

3.7.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan updates; discusses the individual impacts relative to the thresholds of significance; discusses mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and indicates the overall significance of the impact with mitigation incorporated.

Major Sources Used in Analysis

The major sources used in this analysis are listed below.

- San Joaquin Valley Air Pollution Control District (SJVAPCD) plans
- ARB Scoping Plan
- Stanislaus County and cities GHG emissions inventories
- Stanislaus County Council of Governments RTP/SCS EIR

Approach and Methodology

Because implementation of the General Plan and Airport Land Use Compatibility Plan Update would not include any development projects, the impacts on greenhouse gases and energy are examined at a general level in this analysis. Note that although the greenhouse gas analysis relies in part on traffic data, an increase in traffic congestion does not necessarily result in a significant increase in GHG emissions. Forecasted increases in overall vehicle miles travelled is one factor in the GHG emissions analysis.

Thresholds of Significance

Greenhouse Gas Emissions

Based on State CEQA Guidelines Appendix G, the plan updates would have a significant impact with respect to greenhouse gas emissions if they would result in any of the following.

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The State CEQA Guidelines do not indicate what amount of GHG emissions would constitute a significant impact on the environment. Instead, they authorize the lead agency to consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial

evidence (State CEQA Guidelines Sections 15064.4(a) and 15064.7(c)). SJVAPCD has produced GHG guidance to assist lead agencies in determining the level of significance of operational-related GHG emissions, pursuant to CEQA (San Joaquin Valley Air Pollution Control District 2009a). SJVAPCD's GHG guidance is intended to streamline CEQA review by pre-quantifying emissions reductions that would be achieved through the implementation of best performance standards (BPS). Projects are considered to have a less-than-significant cumulative impact on climate change if any of the following conditions are met.

1. Comply with an approved GHG reduction plan;
2. Achieve a score of at least 29¹ using any combination of approved operational BPS.
3. Reduce operational GHG emissions by at least 29% over business-as-usual (BAU) conditions (demonstrated quantitatively).

SJVAPCD guidance recommends quantification of GHG emissions for all projects in which an EIR is required, regardless of whether BPS achieve a score of 29 (San Joaquin Valley Air Pollution Control District 2009b). SJVAPCD does not have an adopted significance threshold for construction-related GHG emissions. However, lead agencies should quantify and disclose GHG emissions that would occur during construction, and make a determination on the significance of these construction-generated GHG emission impacts in relation to meeting AB 32 GHG reduction goals (San Joaquin Valley Air Pollution Control District 2009b).

There is currently no adopted GHG reduction plan for Stanislaus County. Accordingly, option 1 from the SJVAPCD GHG guidance—comply with an approved GHG reduction plan—cannot be used to evaluate project significance. Options 2 and 3 require projects to achieve GHG reductions consistent with the goal of AB 32, which is to reduce statewide GHG emissions to 1990 levels by 2020 (equivalent to a 29% reduction over BAU conditions). As discussed in Section 3.7.2, the California Supreme Court's *Newhall Ranch* decision upheld the use of performance reductions based on AB 32. However, the Court stated that applying statewide BAU targets, which consider both existing and new development, to project-level analyses without any adjustments to isolate new development emissions or consider unique geographic conditions could be misleading and therefore require further justification. Neither SJVAPCD's GHG guidance nor other performance-based targets adopted by expert agencies have disaggregated new development emissions on a percentage basis to satisfy this new requirement imposed by the Court. The primary value of a performance-based target, as indicated in the *Newhall Ranch* decision, is that it can provide a scenario by which to evaluate the effectiveness of a project's efficiency and conservation measures to reduce GHG emissions.

The *Newhall Ranch* decision confirmed that there are multiple potential pathways for evaluating project-level GHG emissions consistent with CEQA, depending on the circumstances of a given project. These potential pathways include reliance on the BAU model,² numeric thresholds, and compliance with regulatory requirements. As noted above, reliance on SJVAPCD's BAU threshold without adjustments for local land use conditions does not meet the criteria identified in the *Newhall Ranch* decision needed to appropriately analyze project-level GHG emissions. Similarly, there are no drafted,

¹ A score of 29 represents a 29% reduction in GHG emissions relative to unmitigated conditions (1 point = 1%). This goal is consistent with the reduction targets established by AB 32 and the Scoping Plan.

² Only if "an examination of the data behind the Scoping Plan's business-as-usual model allowed the lead agency to determine what level of reduction from business as usual a new land use development at the proposed location must contribute in order to comply with statewide goals."

adopted, or recommended numeric thresholds within the SJVAPCD that would be appropriate to the proposed project.

Accordingly, based on the available threshold concepts for the region and the approach authorized by the Court, the following assessment analyzes project emissions in light of adopted state and local GHG regulatory programs. Consistent with recent judicial action³ and the generally recognized scientific understanding⁴ that there will be a need for deeper reductions in GHG emissions in the post-2020 period, the EIR evaluates long-term GHG emissions under full build (2035) conditions.

In accordance with scientific consensus regarding the cumulative nature of GHGs, the analysis provides a cumulative evaluation of GHG emissions. Unlike traditional cumulative impact assessments, this analysis is still project-specific in that it only evaluates direct emissions generated by the project; given the global nature of climate change, the analysis does not include emissions from past, present, and reasonably foreseeable projects in the Plan Area.

Energy

Based on State CEQA Guidelines Appendix F, the plan updates would have a significant impact with respect to greenhouse gases based on the following.

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project, including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The effects of the project on peak- and base-period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

The State CEQA Guidelines recommend that the discussion of applicable energy impacts focuses on whether the project would result in the wasteful, inefficient, or unnecessary consumption of energy, as this may constitute an unavoidable adverse effect on energy resources. Efficiency projects that incorporate conservation measures to avoid wasteful energy usage facilitate long-term energy planning and avoid the need for unplanned or additional energy capacity. Accordingly, based on the criteria outlined in the CEQA Guidelines Appendix F, the proposed project would cause significant impacts related to energy if it would lead to a wasteful, inefficient, and unnecessary usage of direct or indirect energy. As discussed in Section 3.7.2, under *Regulatory Setting*, energy legislation, policies, and standards adopted by California and local governments were enacted and promulgated for the purpose of reducing energy consumption and improving efficiency (i.e., reducing wasteful and inefficient use of energy). Therefore, for the purposes of this plan-level analysis, *wasteful* and

³ See the California Appellate Court, 4th District ruling in *Sierra Club vs. County of San Diego* (2014) 231 Cal.App.4th 1152.

⁴ See the Association of Environmental Professionals Climate Change Committee's *Beyond 2020: The Challenge of Greenhouse Gas Reduction Planning by Local Governments in California* white paper.

inefficient are defined as circumstances in which the project would conflict with applicable state or local energy legislation, policies, and standards. Accordingly, if the project conflicts with legislation, policies, or standards designed to avoid wasteful and inefficient energy usage, it would result in a significant impact related to energy resources and conservation

Impacts and Mitigation Measures

Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment (less than significant)

As indicated in Chapter 2, *Project Description*, the plan updates would include changes to the text of the land use designations of the general plan, but do not propose any changes to the land use map or the existing boundaries of the land use designations. Consequently, it is not anticipated that plan implementation would directly result in construction activities or emissions. It is currently unknown what level of construction activities would occur with implementation of the plan updates. Consequently, emissions from construction activities associated with buildout of the project cannot be quantified and are evaluated qualitatively for purposes of this analysis.

Because the plan updates would not cause any changes to land use or physical changes to the roadway network, no changes in operational emissions (either direct or indirect) would occur, and impacts would be less than significant. While no changes in projected operational emissions would occur with project implementation, operational mobile source emissions were evaluated using daily VMT traffic data provided by the project traffic engineers, Fehr & Peers, and the CT-EMFAC (version 5.0) emissions model. Table 3.7-3 presents a summary of emissions by analysis year for each study scenario evaluated. “Combined” refers to the condition for the entire county, including the cities and unincorporated areas. Emissions and VMT under the “conformity” scenario do not include GHG emissions reductions attributable to the 2014 RTP/SCS, whereas emissions and VMT under the “SB 375” scenario do.

Table 3.7-3. Summary of Emissions by Analysis Year and Study Scenario

Study Scenario	VMT	CO ₂	CO ₂ (Pavley I + LCFS)
2014 Conditions			
2014 Combined – Conformity	3,593,175,801	1,830,307.4	1,699,271.6
2014 Combined – SB 375	1,932,814,771	961,864.5	893,812.4
2014 Unincorporated – Conformity	2,094,556,247	1,075,057.6	997,709.7
2014 Unincorporated – SB 375	442,310,504	217,027.9	201,733.3
2014 Incorporated – Conformity	3,380,471,790	1,724,789.5	1,601,230.2
2014 Incorporated – SB 375	1,490,504,353	744,836.6	692,079.1
2035 Conditions			
2035 Combined – Conformity	5,058,910,967	2,598,853.0	1,863,260.4
2035 Combined – SB 375	2,715,426,962	1,075,373.0	775,471.4
2035 Unincorporated – Conformity	3,377,402,790	1,729,172.1	1,239,475.5
2035 Unincorporated – SB 375	923,102,308	456,877.8	328,875.3
2035 Incorporated – Conformity	4,499,699,057	2,313,657.2	1,658,327.8
2035 Incorporated – SB 375	1,792,324,789	905,810.8	650,818.0
2035 NP Combined – Conformity	4,930,462,671	2,540,551.4	1,820,910.7
2035 NP Combined – SB 375	2,596,718,470	1,304,965.4	938,020.5
2035 NP Unincorporated – Conformity	3,271,124,265	1,681,307.2	1,204,654.4
2035 NP Unincorporated – SB 375	853,305,294	423,293.0	304,608.6
NP = No Project.			
Combined = Emissions and VMT for the entire county, including the cities and unincorporated areas.			
Conformity = Emissions and VMT without implementation of StanCOG's 2014 RTP/SCS			
SB 375 = Emissions and VMT with implementation of StanCOG's 2014 RTP/SCS			

Although no operational emissions associated with the plan updates would occur, Table 3.7-3 indicates that StanCOG's 2014 RTP/SCS ("SB 375" condition) would result in less VMT and GHG emissions than without the implementation of 2014 RTP/SCS ("conformity" condition). Accordingly, implementation of the General Plan would result in a net reduction in mobile source GHG emissions within the unincorporated county. This is consistent with adopted goals to reduce GHG emissions identified in AB 32, as well as the trajectory of statewide GHG legislation (as identified in EO B-30-15 and EO S-03-05). The GHG reductions achieved by the project would also facilitate implementation of StanCOG's 2014 RTP/SCS, including meeting the 2020 and 2035 reduction targets mandated by SB 375. Accordingly, this impact would be less than significant.

Proposed General Plan Goals and Policies that Reduce the Impact

In addition to the adopted General Plan goals and policies listed above. The following goals and policies from the plan updates will help to reduce GHG emissions in the County.

Land Use Element

GOAL SIX. Promote and protect healthy living environments

POLICY TWENTY-NINE. Support the development of a built environment that is responsive to decreasing air and water pollution, reducing the consumption of natural resources and energy, increasing the reliability of local water supplies, and reduces vehicle miles traveled by facilitating alternative modes of transportation, and promoting active living (integration of physical activities, such as biking and walking, into everyday routines) opportunities.

IMPLEMENTATION MEASURES

1. County development standards shall be evaluated and revised, as necessary, to facilitate development incorporating the following (or similar) design features:

- Alternative modes of transportation such as bicycle lanes, pedestrian paths, and facilities for public transit;
- Alternative modes of storm water management (that mimic the functions of nature); and
- Pedestrian friendly environments through appropriate setback, landscape, and wall/fencing standards.

POLICY THIRTY. New development shall be designed to facilitate the efficient extension of public transportation systems.

Circulation Element

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 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.

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.

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.

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.

Significance without Mitigation: Less than significant (no mitigation required)

Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases (less than significant)

As indicated in Chapter 2, *Project Description*, and discussed under Impact GHG-1, the plan updates would include changes to the text of the land use designations of the general plan, but do not propose any changes to the land use map or the existing boundaries of the land use designations. Consequently, the plan updates would not cause any changes to land use or physical changes to the roadway network, and would not result in any changes in operational emissions (either direct or indirect). The project's general plan amendments include amendments to the Land Use and Circulation Elements incorporating principles from the 2014 RTP/SCS. Further, the land use designations identified in the General Plan's land use map form the basis for the land use pattern established in the 2014 RTP/SCS.

Land Use Element

GOAL FOUR. Ensure that an effective level of public service is provided in unincorporated areas.

POLICY TWENTY-FIVE. New development shall pay its fair share of the cost of cumulative impacts on circulation and transit systems.

GOAL FIVE. Complement the general plans of cities within the County.

POLICY TWENTY-SIX. Development, other than agricultural uses and churches, which requires discretionary approval and is within the sphere of influence of cities or in areas of specific designation created by agreement (e.g., Sperry Avenue and East Las Palmas Corridors), shall not be approved unless first approved by the city within whose sphere of influence it lies or by the city for which areas of specific designation were agreed. Development requests within the spheres of influence or areas of specific designation of any incorporated city shall not be approved unless the development is consistent with agreements with the cities which are in effect at the time of project consideration. Such development must meet the applicable development standards of the affected city as well as any public facilities fee collection agreement in effect at the time of project consideration. (Comment: This policy refers to those development standards that are transferable, such as street improvement standards, landscaping, or setbacks. It does not always apply to standards that require connection to a sanitary sewer system, for example, as that is not always feasible.)

Circulation Element

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 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~~.

POLICY EIGHT. Promote public transit as a viable transportation choice.

Further, Table 3.7-3 also indicates that StanCOG's 2014 RTP/SCS ("SB 375" condition) would result in less VMT and GHG emissions than without the implementation of 2014 RTP/SCS ("conformity" condition). Therefore, the plan updates would be consistent with and would not impede StanCOG's 2014 RTP/SCS from meeting the 5% 2020 reduction target and 10% 2035 reduction target mandated by SB 375 for emissions from land use, automobiles, and light trucks. Consequently, this impact is considered less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact EGY-1: Result in the inefficient, wasteful, and unnecessary consumption of energy, including transportation energy use (less than significant)

As indicated in Chapter 2, *Project Description*, and discussed under Impact GHG-1, the plan updates would include changes to the text of the land use designations of the general plan, but do not propose any changes to the land use map or the existing boundaries of the land use designations. Consequently, the plan updates would not cause any changes to land use or physical changes to the roadway network, and would not result in any changes in operational emissions (either direct or indirect). In addition, the policy amendments included in the project would encourage compact development patterns (Land Use Policies Twenty-Five and Twenty-Six) and complete streets (Circulation Policies Six, Eight, and Eleven), thereby providing expanded opportunities for transportation modes other than single-occupancy vehicles. Reducing automobile use will reduce fuel consumption and provide for a more energy efficient transportation system.

Because transportation-related CO₂ emissions directly correlate with the volume of diesel and gasoline combusted,⁵ reducing onroad CO₂ emissions by a certain percentage would roughly reduce fuel consumption by similar proportions. Because the plan updates would be consistent with and not impede StanCOG's 2014 RTP/SCS from meeting the 5% 2020 reduction target and 10% 2035 reduction target mandated by SB 375, the plan updates would be consistent with state and local energy policies and would not result in a wasteful, inefficient, and unnecessary usage of energy. This impact would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

3.7.4 References Cited

Printed References

- Blasing, T. J. 2014. *Recent Greenhouse Gas Concentrations*. DOI: 10.3334/CDIAC/atg.032. Updated February.
- California Air Resources Board. 2011. *Status of Scoping Plan Recommended Measures*. Available: http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf. Accessed: November 19, 2012.
- . 2014. *Area Designations Maps/ State and National*. Last Revised: August 22, 2014. Available: <http://www.arb.ca.gov/desig/adm/adm.htm>. Accessed: September 18, 2014.
- California Department of Transportation. 2009. *2008 Motor Vehicle Stock, Travel, and Fuel Forecast*. June.
- California Energy Commission. 2014. *California Energy Consumption Database*. Available: <http://ecdms.energy.ca.gov/>. Accessed: March 20, 2015.
- Carbon Dioxide Information Analysis Center. 2014. *Recent Greenhouse Gas Concentrations*. Available: http://cdiac.ornl.gov/pns/current_ghg.html. Last Updated: February 2014. Accessed: April 21, 2014.
- . 2014a. *California Greenhouse Gas Inventory for 2000-2012—by Category as Defined in the 2008 Scoping Plan*. Last Revised: May 24, 2014. Available: http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_00-12_2014-03-24.pdf. Accessed: September 18, 2014.
- Center for Climate and Energy Solutions. 2011. *The Greenhouse Effect*. Available: <http://www.c2es.org/facts-figures/basics/greenhouse-effect>. Accessed: January 17, 2012.
- Climate Registry. 2014. *Default Emission Factors*. Last Revised: January 10, 2014. Available: <http://www.theclimateregistry.org/downloads/2014/02/2014-Climate-Registry-Default-Emissions-Factors.pdf>. Accessed: September 24, 2014.
- ICF International. 2013. *Stanislaus County Regional Community Greenhouse Gas Inventory*. July (ICF 00203.10) San Francisco, CA. Prepared for Stanislaus County, Modesto, CA.

⁵ GHG emissions are directly related to vehicle fuel consumption, where 19.4 pounds of CO₂ are emitted per gallon of combusted gasoline and 22.2 pounds of CO₂ are emitted per gallon of combusted diesel (Climate Registry 2014).

- Intergovernmental Panel on Climate Change. 1996. *1995: Science of Climate Change. (Second Assessment Report)*. Cambridge, UK: Cambridge University Press.
- . 2001. Atmospheric Chemistry and Greenhouse Gases. In *Climate Change 2001: Working Group I: The Scientific Basis*. Available: <http://www.ipcc.ch/ipccreports/tar/wg1/pdf/TAR-04.PDF>. Accessed: September 22, 2009.
- . 2007a. *Introduction*. In B. Metz, O. R. Davidson, P. R. Bosch, R. Dave, L. A. Meyer (eds.), *Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, 2007*. Cambridge, UK, and New York, NY, USA: Cambridge University Press. Available: <http://www.ipcc.ch/pdf/assessment-report/ar4/wg3/ar4-wg3-chapter1.pdf>. Accessed: August 11, 2009.
- . 2007b. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K. B. Averyt, M. Tignor and H. L. Miller (eds.). Available: <http://www.ipcc.ch/ipccreports/ar4-wg1.htm>. Accessed: September 22, 2009.
- Myhre, G., D. Shindell, F.-M. Bréon, W. Collins, J. Fuglestvedt, J. Huang, D. Koch, J.-F. Lamarque, D. Lee, B. Mendoza, T. Nakajima, A. Robock, G. Stephens, T. Takemura, and H. Zhang. 2013. Anthropogenic and Natural Radiative Forcing. Pages 659–740 in T. F. Stocker, D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex, and P. M. Midgley (eds.), *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge, UK, and New York, NY, USA: Cambridge University Press.
- National Oceanic and Atmospheric Administration. 2005. *Greenhouse Gases: Frequently Asked Questions*. Available: <http://lwf.ncdc.noaa.gov/oa/climate/gases.html>. Accessed: September 22, 2009.
- . 2014. *Up-to-Date Weekly Average CO₂ at Mauna Loa*. Available: <http://www.esrl.noaa.gov/gmd/ccgg/trends/weekly.html>. Accessed: September 18, 2014.
- San Joaquin Valley Air Pollution Control District. 2009a. *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA*. December 17.
- . 2009b. *Final Staff Report: Addressing Greenhouse Gas Emissions Impacts Under The California Environmental Quality Act*. December 17.
- Stanislaus Area Council of Governments. 2014. *2014 Regional Transportation Plan/Sustainable Communities Strategy Final Programmatic Environmental Impact Report*. June.
- U.S. Energy Information Administration. 2013. *AEO2014 Early Release Overview*. Last Revised: December 16, 2013. Available: http://www.eia.gov/forecasts/aeo/er/tables_ref.cfm. Accessed: September 24, 2014.

- U.S. Energy Information Administration. 2014. *California State Profile and Energy Estimates*. Last Revised: July 17, 2014. Available: <http://www.eia.gov/state/?sid=CA#tabs-1>. Accessed: September 24, 2014.
- U.S. Environmental Protection Agency. 2015. *Overview of Greenhouse Gases: Emissions of Fluorinated Gases*. Available: <http://epa.gov/climatechange/ghgemissions/gases/fgases.html>. Accessed: April 10, 2015.
- . 2007. *Greenhouse Gas Emissions from Freight Trucks*. Presentation at the International Emissions Inventory Conference. May 16.
- . 2011a. *EPA and NHTSA Propose to Extend the National Program to Reduce Greenhouse Gases and Improve Fuel Economy for Cars and Trucks*. Available: <http://www.epa.gov/oms/climate/documents/420f11038.pdf>. Accessed: April 10, 2015.
- . 2014a. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2012*. EPA 430-R-14-003. April. Available: <http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html>. Accessed: September 18, 2014.

3.8 Hazards and Hazardous Materials

3.8.1 Introduction

This section discusses the impacts of the plan updates with respect to hazards and hazardous materials. It lists the thresholds of significance that form the basis of the environmental analysis, describes the hazards and hazardous materials study area and major sources used in the analysis, provides environmental setting information that is relevant to hazards and hazardous materials, and assesses whether the plan updates would result in significant impacts.

Study Area

The hazards and hazardous materials impact study area for the project is defined as Stanislaus County.

3.8.2 Environmental Setting

This section describes the federal, state, and local regulations and policies that are applicable to the plan updates, and the existing conditions pertaining to hazards and hazardous materials in the study area. The existing conditions will constitute the baseline for analysis.

Regulatory Setting

This section describes the federal, state, regional, and local regulations related to hazards and hazardous materials that would apply to the plan updates.

Federal

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, is a federal act establishing a national trust for hazardous waste-related industries to be able to fund and coordinate large cleanup activities for hazardous waste spills and accidents and to clean up older abandoned waste sites. Amended in 1986, the act establishes two primary actions: (1) to coordinate short-term removal of hazardous materials and (2) to coordinate and manage the long-term removal of hazardous materials identified on the EPA's National Priorities List (NPL). The NPL is a record of known or threatened releases of hazardous substances, pollutants, or contaminants. A national database and management system, known as the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), is used by EPA to track activities at hazardous waste sites considered for cleanup under CERCLA. CERCLA also maintains provisions and guidelines dealing with closed and abandoned waste sites and tracks amounts of liquid and solid media treated at sites on the NPL or sites that are under consideration for the NPL.

Resource Conservation and Recovery Act of 1976 (United States Code, Title 42, Sections 6901–6987)

The Resource Conservation and Recovery Act of 1976 (RCRA), including the Hazardous and Solid Waste Amendments of 1984, protects human health and the environment, and imposes regulations on hazardous waste generators, transporters, and operators of treatment, storage, and disposal facilities (TSDFs). The amendments also require EPA to establish a comprehensive regulatory program for underground storage tanks. The corresponding regulations in 40 CFR 260–299 provide the general framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat, and dispose of hazardous waste.

Toxic Release Inventory

The Emergency Planning and Community Right-to-Know Act of 1986 and the Pollution Prevention Act of 1990 established a publicly available database that has information on toxic chemical releases and other waste management activities called the Toxic Release Inventory. It is updated annually and lists chemical releases by industry groups and federal facilities managed by EPA.

Risk Management Plan

Under the authority of Section 112(r) of the Clean Air Act, the Chemical Accident Prevention Provisions require facilities that produce, handle, process, distribute, or store certain chemicals to develop a Risk Management Program, prepare a Risk Management Plan (RMP), and submit the RMP to EPA.

State**California Accidental Release Prevention Program**

As specified in 19 CCR 2, Chapter 4.5, Articles 1 through 11, all businesses that handle specific quantities of hazardous materials are required to prepare a California Accidental Release Prevention Program Risk Management Plan (CalARP RMP). The CalARP RMP is the state equivalent of the federal RMP. CalARP RMPs include the preparation of an offsite consequence analysis of worst-case release of the stored chemicals and the preparation of emergency response plans, including coordination with local emergency response agencies. CalARP RMPs are required to be updated at least every 5 years, and when there are significant changes to the stored chemicals.

Hazardous Materials Release Response Plans and Inventory Act

The Hazardous Materials Release Response Plans and Inventory Act (also known as the Business Plan Act) requires a business using hazardous materials to prepare a business plan describing the facility, inventory, emergency response plans, and training programs. The owner or operator of any business that has specified amounts of liquid and solid hazardous materials, compressed gases, extremely hazardous substances, or underground storage sites on site, or that generates or treats hazardous waste is required to develop and submit a business plan to the local Certified Unified Program Agency (CUPA), which, for the proposed project, is the Hazardous Materials Division of Stanislaus County Department of Environmental Management.

Hazardous Waste Control Act

The state equivalent of RCRA is the Hazardous Waste Control Act, which created the State Hazardous Waste Management Program, which is similar to the RCRA program but generally more stringent. The Hazardous Waste Control Act establishes requirements for the proper management of hazardous substances and wastes with regard to criteria for (1) identification and classification of hazardous wastes; (2) generation and transportation of hazardous wastes; (3) design and permitting of facilities that recycle, treat, store, and dispose of hazardous wastes; (4) treatment standards; (5) operation of facilities; (6) staff training; (7) closure of facilities; and (8) liability requirements.

Emergency Services Act

Under the California Emergency Services Act, the State developed an emergency response plan to coordinate emergency services provided by all governmental agencies. The plan is administered by the California Office of Emergency Services (OES). OES coordinates the responses of other agencies, including EPA, the Federal Emergency Management Agency, the California Highway Patrol, RWQCBs, air quality management districts, and county disaster response offices. Local emergency response teams, including fire, police, and sheriff's departments, provide most of the services to protect public health.

California Health and Safety Codes

The California Environmental Protection Agency (Cal-EPA) has been granted primary responsibility by EPA for administering and enforcing hazardous materials management plans within California. Cal-EPA defines a hazardous material more generally than EPA as a material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released (26 CCR 25501).

State regulations include detailed planning and management requirements to ensure that hazardous materials are properly handled, stored, and disposed of to reduce human health risks. In particular, the State has acted to regulate the transfer and disposal of hazardous waste. Hazardous waste haulers are required to comply with regulations that establish numerous standards, including criteria for handling, documenting, and labeling the shipment of hazardous waste (26 CCR 25160 et seq.). Hazardous waste TSDFs are also highly regulated and must meet standard criteria for processing, containment, and disposal of hazardous materials (26 CCR 25220).

“Cortese” List

Cal-EPA maintains the Hazardous Wastes and Substances Site (Cortese) List, a planning document used by state and local agencies and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. The list must be updated at least once per year, per Government Code Section 65962.5. The California Department of Toxic Substances Control, SWRCB, and California Department of Resources Recycling and Recovery all contribute to the site listings.

Public School Siting Requirements

The California Department of Education has developed a School Site Selection and Approval Guide to help school districts (1) select school sites that provide both a safe and a supportive environment for the instructional program and the learning process; and (2) gain state approval for the selected

sites. Safety is the first consideration in the selection of school sites. Safety factors considered include the following: (1) proximity to airports; (2) proximity to high-voltage power transmission lines; (3) presence of toxic and hazardous substances; (4) hazardous air emissions and facilities within a half mile; (5) other health hazards; (6) proximity to railroads; (7) proximity to high-pressure natural gas lines, gasoline lines, pressurized sewer lines, or high-pressure water pipelines; (8) proximity to propane tanks; (9) noise; (10) proximity to major roadways; (11) results of geological studies and soils analyses; (12) condition of traffic and school bus safety; (13) safe routes to school; and (14) safety issues for joint-use projects.

The presence of potentially toxic or hazardous substances on or in the vicinity of a prospective school site is a concern relating to the safety of students, staff, and the public. The school district must submit materials documenting compliance with the toxic and hazardous substances requirements before submitting the balance of the site approval package documents required by the California Department of Education.

California Public Resources Code – State Responsibility Area

The California PRC requires the designation of State Responsibility Areas (SRAs), which are identified based on cover, beneficial water uses, probable erosion damage and fire risks, and hazards. The financial responsibility of preventing and suppressing fires in an SRA is primarily the responsibility of the State. Fire protection in areas outside an SRA are the responsibilities of local or federal jurisdictions and are referred to as local responsibility areas and federal responsibility areas, respectively. Stanislaus County includes SRAs on its western and eastern sides, but has no local responsibility areas. (CalFire 2015)

Very High Fire Hazard Severity Zones

Government Code Section 51178 requires the Department of Forestry and Fire Protection to identify very high fire hazard severity zones in the state. Government Code Section 51179 requires a local agency to designate, by ordinance, very high fire hazard severity zones in its jurisdiction.

Local

Stanislaus County General Plan

The Land Use Element and Safety Element of the Stanislaus County General Plan address goals and policies related to services critical to human health and safety. The following goals and policies are identified with respect to hazards and hazardous materials.

Land Use Element

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY FOUR. Urban development shall be discouraged in areas with growth-limiting factors such as high water table or poor soil percolation, and prohibited in geological fault and hazard areas, flood plains, riparian areas, and airport hazard areas unless measures to mitigate the problems are included as part of the application.

Safety Element

GOAL ONE. Prevent loss of life and reduce property damage as a result of natural disasters.

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.

POLICY TWO. Development should not be allowed in areas that are within the designated floodway.

POLICY THREE. Development should not be allowed in areas that are particularly susceptible to seismic hazard.

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.

POLICY FIVE. Stanislaus County shall support efforts to identify and rehabilitate structures that are not earthquake resistant.

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.

POLICY SEVEN. Adequate fire and sheriff protection shall be provided.

POLICY EIGHT. Roads shall be maintained for the safety of travelers.

POLICY NINE. The County shall support the formation of improvement districts (including flood control districts) to eliminate safety hazards.

POLICY TEN. The County shall limit the siting of air strips.

POLICY ELEVEN. Restrict large communications–antennas–within the agricultural area with respect to maximum height, markings (lights) and location to provide maximum safety levels.

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.

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.

POLICY FOURTEEN. The County will continue to enforce state-mandated structural Health and Safety Codes, including but not limited to the Uniform Building Code, the Uniform Housing Code, the Uniform Fire Code, the Uniform Plumbing Code, the National Electric Code, and Title 24.

POLICY FIFTEEN. The County will support the Federal Emergency Management Agency (FEMA) Flood Insurance Program so that residents who qualify may purchase such protection.

(Note: 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 of the Stanislaus County Code meets the FEMA standards.)

Stanislaus County Certified Unified Program Agency

Cal EPA can delegate responsibility for hazardous materials oversight, permitting, and regulation to local agencies through the 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. The programs for which the Hazardous Materials Division is responsible are: the Hazardous Waste Management Plan, Underground Storage Tank Program, Above Ground Storage Tank Program, California Accidental Release Prevention Program, Household Hazardous Waste Collection Program, Medical Waste Program, Hazardous Materials Disclosure Program (including Hazardous Materials Business Plans), Conditionally Exempt Small Quantity Generator Program, and the Tiered Permitting Program. The Hazardous Materials Business Plan is used to keep track of the use of hazardous materials by businesses in accordance with both state and federal laws. (City of Ceres 2011).

Existing Conditions

Hazardous Material Release Sites

There are a number of federal and state databases that provide information regarding the facilities or sites identified as meeting the Cortese List requirements and which list the past and present businesses that have had or are currently experiencing a hazardous materials release within the County. These include CERCLIS, GeoTracker (the leaking underground storage tank database), EnviroStor, the Toxic Release Inventory, and the List of Active Cease and Desist Orders and Cleanup and Abatement Orders.

There are 18 CERCLA sites within Stanislaus County (U.S. Environmental Protection Agency 2014). There are 174 open cleanup sites listed on GeoTracker (State Water Resources Control Board 2014). There are six active sites listed on the California Department of Toxic Substances Control EnviroStor Database (Department of Toxic Substances Control 2014). There are 22 sites in Stanislaus County on the list of Cease and Desist Orders and Cleanup and Abatement Orders (U.S. Environmental Protection Agency 2014). Examples of these sites from each database include leaking underground storage tanks, dry cleaning facilities, landfills, and methamphetamine labs.

Household and Business Hazardous Waste

Hazardous materials may be stored in aboveground storage tanks (ASTs), underground storage tanks (USTs), drums, and other types of containers. Typically, USTs are used by businesses, such as gasoline stations. Many households store heating fuel such as propane in ASTs. There are 213 permitted USTs facilities, 614 permitted USTs, and 199 AST facilities in Stanislaus County (Stanislaus County Hazardous Materials Division 2015).

Airport-Related Hazards

There are three airports located in Stanislaus County: the Modesto City-County Airport, the Oakdale Municipal Airport, and the former Crows Landing Air Facility. With the exception of Crows Landing, these airports are located in urban areas. Additionally, there are approximately 19 private airports in the county (Stanislaus County 2014a). Approach and take-off patterns may cause safety problems for both airplanes and occupants on the ground.

The Stanislaus County ALUCP ensures compatibility between these airports and the land uses surrounding them to the extent that these areas have not already been devoted to incompatible

uses. The plan specifies height and various other land use restrictions to prevent creation of physical, visual, or electronic hazards to flight within the airspace required for operation of aircraft to and from the airports. (Stanislaus County 2014b).

Asbestos-Related Hazards

Asbestos is a naturally occurring fibrous mineral that is a human health hazard when airborne. Asbestos is classified as a known human carcinogen by state and federal agencies and was identified as a toxic air contaminant by the California Air Resources Board. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. Surfacing materials (i.e., gravel for roads) are required to contain less than 0.25% asbestos. See Section 3.3, *Air Quality*, for further discussion of asbestos hazards in Stanislaus County.

Fire-Related Hazards

Urban fires are generally human-caused fires that can be mitigated through proper building code requirements, such as the California Building Code, California Fire Code, and zoning or subdivision ordinance requirements.

Wildland fires are generally limited to the foothills on either side of the county. Fire hazard severity in the foothills is very high in the western portion of the county and high along the eastern edge (Department of Forestry and Fire Protection 2007). Although there is less of a hazard to structures and people, controlling such fires is more difficult because of their inaccessibility. These fires are mitigated through application of the California Public Resources code and specific Ranger Unit Fire Plans.

Natural Disaster-Related Hazards

Flooding

The major flooding in Stanislaus County occurs along the San Joaquin River and isolated stretches of the Tuolumne River. Creeks such as the 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 U.S. Army Corps of Engineers has purchased flowage easements so that they have the "right" to flood this area.

Seismic

Several known faults exist within Stanislaus County. They are located in the 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.

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 Section 3.6, *Geology, Soils, and Paleontological Resources*).

Schools-Related Hazards

Hazardous emissions and accidental release or combustion of hazardous materials near existing schools could result in health risks or other dangers to students. There are 36 school districts within the county, as well as the Yosemite College District, with two junior college campuses. The county also has one 4-year California State University campus in Turlock and Chapman University on SR-99. Most districts in the county are experiencing growth and many have added new facilities, are completing construction of new facilities, or are studying the feasibility of adding or replacing facilities within the next few years. (Stanislaus County 2010).

Emergency Response and Evacuations

The Stanislaus County Multi-Hazard Functional Emergency Operations Plan provides coordinated disaster response and programs to assist the public in emergency preparedness and response procedures (Stanislaus County 2010). The plan is a comprehensive resource document that serves many purposes, including: enhancing public awareness and understanding, creating a decision tool for management, promoting compliance with State and Federal program requirements, enhancing local policies for hazard mitigation capability, and providing inter-jurisdictional coordination.

The Emergency Medical Services system in Stanislaus County is typical of systems statewide. The county has five primary dispatch centers called Public Safety Answer Points, or PSAPs. The county has seven emergency transport providers, including two air ambulance services and five ground ambulance agencies. Some of the ground services are public entities, while others are privately owned. Like most California counties, Stanislaus is thus served by multiple dispatch centers, multiple fire agencies, and a mixture of public and private ambulance providers and hospitals. (California State University, Stanislaus 1999).

3.8.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan updates; the individual impacts relative to the thresholds of significance; mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and the overall significance of the impact with mitigation incorporated.

Major Sources Used in Analysis

The major sources used in this analysis are listed below:

- The California Department of Forestry and Fire Protection and Fire Resource Assessment Program (see <http://frap.fire.ca.gov/>) and Fire Hazard Severity Zone Map for Stanislaus County (http://www.fire.ca.gov/fire_prevention/fhsz_maps_stanislaus.php)
- Stanislaus County Certified Unified Program Agency for hazardous materials (<http://www.stancounty.com/er/hazardous-materials.shtm>)
- Stanislaus County Multi-Jurisdictional Hazard Mitigation Plan (<http://www.stanoes.com/mjhmp.shtm>)

Approach and Methodology

The baseline for hazards and hazardous materials includes the hazards and hazardous materials that currently exist in the area and that are identified in the Stanislaus County General Plan and other sources cited above in *Environmental Setting*. This section provides a qualitative discussion of the potential risks involving hazards and hazardous materials as a result of the proposed project.

Thresholds of Significance

Based on State CEQA Guidelines Appendix G, the plan update would have a significant impact with respect to hazards and hazardous materials if it would result in any of the following.

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-half mile of an existing or proposed school.
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
- Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area.
- Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Impacts and Mitigation Measures

Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (less than significant)

Implementation of the general plan update would lead to urban development and other land use activities that would require the routine transport, use, or disposal of hazardous materials and wastes within Stanislaus County, and that could result in reasonably foreseeable accident conditions involving the release of hazardous materials into the environment. Existing Policy Thirteen of Goal Two of the General Plan Safety Element prescribes the preparation of a Hazardous Waste Management Plan. Stanislaus County has prepared this plan, which serves as the guideline for managing hazardous wastes in the county. This plan governs the maintenance of a hazardous

materials response team to assist police and fire agencies during transportation and industrial accidents involving chemical spills.

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.

Because general plan policies, and existing State and County regulatory programs are, and would continue to be in place to reduce potential hazards, even with increasing commercial and industrial land uses, this would be a less-than-significant impact.

Significance without Mitigation: Less than significant (no mitigation required)

Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (less than significant)

Implementation of the general plan update would lead to urban development. Construction equipment typical of many development projects has the potential to release oils, greases, solvents, and other finishing materials through accidental spills. Spill or upset of these materials would have the potential to affect surrounding land uses. However, the consequences of construction-related spills are not as great as other accidental spills and releases because the amount of hazardous material released during a construction-related spill is small—the volume in any single piece of construction equipment is generally less than 50 gallons, and fuel trucks are limited to 10,000 gallons or less. Construction-related spills of hazardous materials are not uncommon, but the enforcement of construction and demolition standards, including a SWPPP and BMPs by appropriate local and state agencies (i.e., fire departments) would minimize the potential for an accidental release of petroleum products and/or hazardous materials during construction. Federal, state, and local controls have been enacted, and are enforced, to reduce the effects of potential hazardous materials spills during construction of program facilities. Therefore, it is not anticipated that use of hazardous materials during construction would result in a reasonably foreseeable upset or accident condition that would cause significant hazard to the public or environment.

Reasonably foreseeable spills under operational conditions would be handled according to the specifications of the County Hazardous Waste Management Plan. This plan governs the preparation and implementation the County's Area Plan for emergency response to chemical spills in the community.

There would be limited potential for a reasonably foreseeable upset or accident under construction and operation due to the quantity and type of hazardous materials used; therefore, it is not anticipated that a significant hazard to the public or the environment would occur. This impact would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact HAZ-3: Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-half mile of an existing or proposed school (less than significant)

Implementation of the general plan update would lead to urban development and the intensification of land uses that could emit hazardous emissions or result in the handling of hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. The general plan does not explicitly incorporate policies to limit the use of hazardous materials near school sites, and limit the development of proposed schools near existing contamination. However, existing Policy One of Goal One of the General Plan Safety Element prescribes that the County follow the policies included in the adopted County of Stanislaus Multi-Jurisdictional Hazard Mitigation Plan. The County routinely consults with the affected school district prior to discretionary approval of new businesses and industry that use hazardous materials near existing school sites as part of the project review process. Additionally, school siting regulations implemented by the Department of Education prohibit locating proposed schools near existing contamination. Therefore, this impact is less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact HAZ-4: Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment (less than significant with mitigation)

Implementation of the general plan update would lead to urban development and other activities that could be located on a site listed as containing hazardous materials (compiled pursuant to Government Code Section 65962.5) and, as a result, could create a significant hazard to the public or environment. This would be a potentially significant impact.

There are a number of sites identified in Stanislaus County that contain groundwater or soil contamination. They are included on a list (i.e., GeoTracker, EnviroStor, CalRecycle Solid Waste Information System list) of hazardous materials or contaminated sites pursuant to Government Code Section 65962.5. Among these sites, some have a history of contamination due to hazardous materials spills, leakage from underground storage tanks, landfills, or other releases that are subject to federal and state environmental laws and regulations. Many of these sites are undergoing assessment or remediation overseen by the Stanislaus County Division of Environmental Health, CalRecycle (formerly the Integrated Waste Management Board), or the RWQCB.

Other sites, particularly agricultural sites that have a history of former agricultural operations, may also contain chemicals including heavy metals and organic compounds that can persist in the soil and contain residues that could pose health risks to sensitive receptors. As a result, land development allowed under the general plan could create a hazard to the public or the environment if development occurs on contaminated sites. In general contaminated sites are restricted from development until they are cleaned up and remediated, and development applications are required by state law to provide information on whether a proposed development site is listed as a hazardous materials site.

Significance without Mitigation: Less than significant (no mitigation required)

Impact HAZ-5: Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area (less than significant)

Implementation of the general plan update would lead to urban development and other activities that could be within 2 miles of a public airport or public use airport. Development in this vicinity could result in a safety hazard to people on the ground and in the plane during take-off and ascent.

To reduce this impact, Stanislaus County prepared a draft ALUCP in 2014, specifying height and various other land use restrictions to prevent creation of physical, visual, or electronic hazards to flight within the airspace required for operation of aircraft to and from the airports. Therefore, with adoption and implementation of the ALUCP, the impacts would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact HAZ-6: Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area (less than significant with mitigation)

Similar to Impact HAZ-5, implementation of the general plan update would lead to urban development and other activities that could be within the vicinity of one of the 19 private airstrips in the county. Development in this vicinity could result in a safety hazard to people on the ground and in the plane during take-off and ascent.

Stanislaus County prepared a draft ALUCP in 2014. However, the purpose of the plan is to promote compatibility between the three public airports and the land uses surrounding them. The ALUCP does not cover land use surrounding private airstrips.

The Land Use Element contains policies that discourage development within airport hazard zones. However, these policies do not explicitly discourage development within airstrip hazard zones. This impact is potentially significant. The proposed amendment to Policy Four of Goal One of the General Plan Land Use Element will reduce this impact to a less than significant level.

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY FOUR. Urban development shall be discouraged in areas with growth-limiting factors such as high water table or poor soil percolation, and prohibited in geological fault and hazard areas, flood plains, riparian areas, and airport and private airstrip hazard areas unless measures to mitigate the problems are included as part of the application.

Significance without Mitigation: Less than significant (no mitigation required)

Impact HAZ-7: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (less than significant)

Stanislaus County is working to develop evacuation routes to be used in case of a disaster, including dam failure. Implementation of the general plan update would lead to construction activities for development and infrastructure maintenance that could intersect these evacuation routes.

Responsibility for the day-to-day administration of Stanislaus County's disaster preparedness, mitigation, response, and recovery programs has been assigned to the OES. The OES develops and maintains the Stanislaus County Emergency Operations Plan and its associated annexes. It also

coordinates training, planning, and exercises for first responders throughout the Stanislaus Operational Area. (Stanislaus County 2014)

Additionally, Stanislaus County has adopted the 2010 Multi-Jurisdictional Hazard Mitigation Plan. The Stanislaus County Multi-Jurisdictional Hazard Mitigation Plan is a countywide plan that identifies risks posed by disasters, and identifies ways to minimize damage from those disasters. The plan is a comprehensive resource document that serves many purposes, including: enhancing public awareness and understanding, creating a decision tool for management, promoting compliance with State and Federal program requirements, enhancing local policies for hazard mitigation capability, and providing inter-jurisdictional coordination. This Plan includes a risk assessment, vulnerability analysis, and mitigation plan/strategy for earthquake, landslide, dam failure, flood, and wildfire hazards.

Typical transportation infrastructure improvements could include curb, gutter, street re-striping, and road widening to accommodate acceleration and deceleration lanes. Typical construction activities could block roads or constrict traffic due to the placement of stockpiling areas or construction equipment. These activities could potentially interfere with emergency response equipment. To lessen this impact, notification of the proposed projects and construction dates would be sent to all local responders and to the OES. Therefore, impacts would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact HAZ-8: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (less than significant)

Several factors contribute to the susceptibility of wildfire danger in Stanislaus County, including climate, winds, steep terrain, vegetation, subdivision design, and water supply. Most of the fire susceptible areas are in the extreme eastern and western portion of the county. With the exception of the Diablo Grande development southwest of the City of Patterson, these areas have very low development potential. Diablo Grande is a previously approved residential, commercial, and golf course development within an area identified as having high to moderate fire severity risk on CalFire's State Responsibility Area map for Stanislaus County.

Although most development under the general plan update would be expected to occur in urban or urbanizing areas, it could occur in portions of the county within moderate to very high fire severity areas. This could put residents, visitors, or businesses at risk of wildland fires. Stanislaus County's Multi-Jurisdictional Hazard Mitigation Plan, which was updated in 2010, addresses and provides mitigation for the following hazards: earthquakes, landslides, dams, floods, and wildfires; and is mandated by existing Policy One of Goal One of the General Plan Safety Element. In addition, several amended Safety Element policies address the issue of wildland fire to ensure that future development will meet fire safe code requirements.

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

3. Development standards shall be imposed to provide street lighting, storm drainage, adequate setbacks, fire walls and fire safe standards for defensible space.

4. All building permits shall be reviewed to ensure compliance with the Uniform Building Code California Code of Regulation, Title 24, California Building Codes.

POLICY SEVEN. Adequate fire and sheriff protection shall be provided.

IMPLEMENTATION MEASURES

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. All projects in State Responsibility Areas or Very High Fire Hazard Severity Zone shall be routed to CALFire for comments.
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 and setbacks. 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.
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.
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 Public Resources Code Section 4290 and 4291, or more stringent specific standards as may be adopted by the Board of Supervisors for this County.

Compliance with and implementation of the plan would reduce this impact to less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

3.8.4 References Cited

Printed References

- CalFire. 2015. *Wildland Hazard and Building Codes*. Stanislaus County FHSZ Map. Available: http://www.fire.ca.gov/fire_prevention/fhsz_maps_stanislaus. Accessed: October 8, 2015.
- California State University, Stanislaus. 1999. *Stanislaus County Emergency Medical Services*. Prepared by the Center for Public Policy Studies.
- City of Ceres. 2011. *West Ceres Specific Plan Project (Final)*. Ceres, CA. Prepared by Wood Rodgers.
- Department of Forestry and Fire Protection. 2007. Stanislaus County Fire Hazard Severity Zones in SRA. Available: http://www.fire.ca.gov/fire_prevention/fhsz_maps_stanislaus.php. Accessed: December 10, 2014.

- Department of Toxic Substances. 2014. Envirostor Search Results. Available: <http://data.ca.gov/2011/12/20/envirostor/>. Accessed: December 10, 2014.
- Stanislaus County. 2010. *Stanislaus County Multi-Jurisdictional Hazard Mitigation Plan*. Available: <http://www.stanoes.com/mjhmp.shtm>. Accessed: December 10, 2014.
- . 2014a. *Stanislaus County Public and Private Airports, California*. Available: <http://www.tollfreeairline.com/california/stanislaus.htm>. Accessed: December 10, 2014.
- . 2014b. *Stanislaus County Airport Land Use Commission Plan Update*. Available: <http://www.stancounty.com/planning/pl/tmp-proj/gp-update/ALUCP.pdf>. Accessed: December 10, 2014.
- State Water Resources Control Board. 2014. *Geotracker Search Results*. Available: <http://geotracker.waterboards.ca.gov/>. Accessed: December 10, 2014.
- U.S. Environmental Protection Agency. 2014. *CERCIS Search Results*. Available: <http://www.epa.gov/enviro/facts/cerclis/search.html>. Accessed: December 10, 2014.

3.9 Hydrology and Water Quality

3.9.1 Introduction

This section discusses the impacts of the plan updates with respect to hydrology and water quality. It lists the thresholds of significance that form the basis of the environmental analysis, describes the hydrology and water quality study area and major sources used in the analysis, provides environmental setting information that is relevant to hydrology and water quality, and assesses whether the plan updates would result in significant impacts with respect to hydrology and water quality.

Study Area

The hydrology and water quality study area for this EIR is defined as Stanislaus County.

3.9.2 Environmental Setting

This section describes the federal, state, regional, and local regulations and policies that are applicable to the plan updates, and the existing conditions pertaining to hydrology and water quality in the study area. The existing conditions will constitute the baseline for environmental analysis.

Regulatory Setting

This section describes the federal, state, regional, and local regulations related to hydrology and water quality that would apply to the plan updates.

Federal

Clean Water Act

The CWA provides for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. The CWA emphasizes technology-based (end-of-pipe) control strategies and requires discharge permits to allow use of public resources for waste discharge. The CWA also limits the amount of pollutants that may be discharged and requires wastewater to be treated with the best treatment technology economically achievable regardless of receiving water conditions. The control of pollutant discharges is established through NPDES permits that contain effluent limitations and standards. EPA has delegated responsibility for implementation of portions of the CWA, such as Sections 303, 401, and 402 (discussed below), to the SWRCB and the associated nine RWQCBs. The proposed project site is located within the jurisdiction of the Central Valley RWQCB.

Section 303(d) and Total Maximum Daily Loads

The State of California adopts water quality standards to protect beneficial uses of waters of the state as required by Section 303(d) of the CWA and the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act). Section 303(d) of the CWA established the total maximum daily load (TMDL) process to guide the application of state water quality standards (see the discussion below).

To identify candidate water bodies for TMDL analysis, a list of water quality-impaired segments is generated by the SWRCB. These stream or river segments are impaired by the presence of pollutants such as sediment and are more sensitive to disturbance because of this impairment.

In addition to the impaired water body list required by CWA Section 303(d), CWA Section 305(b) requires states to develop a report assessing statewide surface water quality. Both CWA requirements are being addressed through the development of a 303(d)/305(b) integrated report, which will address both an update to the 303(d) list and a 305(b) assessment of statewide water quality. The SWRCB developed California's statewide *2010 Integrated Report* based on the integrated reports from each of the nine RWQCBs. The *2010 Integrated Report* was approved by the SWRCB on August 4, 2010, and approved by EPA on November 12, 2010, and the *2012 Integrated Report* with 303(d) listings is currently under development.

Section 401—Water Quality Certification

Section 401 of the CWA requires that an applicant pursuing a federal permit to conduct an activity that may result in a discharge of a pollutant obtain a Water Quality Certification (or waiver). A Water Quality Certification requires the evaluation of water quality considerations associated with dredging or placement of fill materials into waters of the United States. Water Quality Certifications are issued by one of the nine geographically separated RWQCBs in California. Under the CWA, the RWQCB must issue or waive a Section 401 Water Quality Certification for a project to be permitted under CWA Section 404.

Section 402—National Pollutant Discharge Elimination System

The 1972 amendments to the federal Water Pollution Control Act established the NPDES permit program to control discharges of pollutants from point sources (Section 402). The 1987 amendments to the CWA created a new section of the CWA devoted to stormwater permitting (Section 402[p]). EPA has granted the State of California (the SWRCB and RWQCBs) primacy in administering and enforcing the provisions of the CWA and NPDES. NPDES is the primary federal program that regulates point-source and nonpoint-source discharges to waters of the United States.

NPDES General Permit for Construction Activities

The *General NPDES Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ)* (Construction General Permit) regulates stormwater discharges for construction activities (CWA Section 402). Dischargers whose projects disturb one or more acres of soil, or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the Construction General Permit. The Construction General Permit requires the development and implementation of a SWPPP.

Best management practices (BMPs) included in the SWPPP may include measures such as the following.

1. Providing permeable surfaces where feasible.
2. Retaining and treating stormwater onsite using catch basins and filtering wet basins.
3. Minimizing the contact of construction materials, equipment, and maintenance supplies with stormwater.

4. Reducing erosion through soil stabilization, watering for dust control, installing perimeter silt fences, placing rice straw bales, and installing sediment basins. In order to minimize potential impacts on wildlife, no monofilament plastic mesh or line will be used for erosion control.
5. Maintaining water quality by using infiltration systems, detention systems, retention systems, constructed wetland systems, filtration systems, biofiltration/bioretention systems, grass buffer strips, ponding areas, organic mulch layers, planting soil beds, sand beds, and vegetated systems such as swales and grass filter strips that are designed to convey and treat either fallow flow (swales) or sheetflow (filter strips) runoff.

In addition, a procedure for spill prevention and control is typically developed to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during all construction activities. If a spill should occur during construction that causes a release of a hazardous material, including oil and radioactive materials, the proper agencies are typically notified and an Emergency Release Follow-up Notice Reporting Form is submitted no more than 30 days following the release.

NPDES General Municipal Stormwater Permit

CWA Section 402 mandates programmatic permits for municipalities to address stormwater discharges, which are regulated under the *NPDES General Permit for Municipal Separate Storm Sewer Systems* (MS4) (MS4 Permit). Phase I MS4 regulations cover municipalities with populations greater than 100,000, certain industrial processes, or construction activities disturbing an area of 5 acres or more. Phase II (Small MS4) regulations require that stormwater management plans be developed by municipalities with populations smaller than 100,000 and construction activities disturbing 1 or more acres of land area.

The SWRCB is advancing Low Impact Development (LID) in California as a means of complying with municipal stormwater permits. LID incorporates site design, including among other things the use of vegetated swales and retention basins and minimizing impermeable surfaces, to manage stormwater to maintain a site's predevelopment runoff rates and volumes.

Waste Discharge Requirements for Dewatering and Other Low Threat Discharges to Surface Waters

CWA Section 402 also includes Waste Discharge Requirements (WDRs) for dewatering activities. Although small amounts of construction-related dewatering are covered under the Construction General Permit, the Central Valley Water Board has regulations specific to dewatering activities that typically involve reporting and monitoring requirements.

If dewatering is required as part of a proposed project, then the project applicant will need to comply with the Central Valley RWQCB dewatering requirements. The Construction General Permit typically covers uncontaminated dewatering activities, which are considered in the permit to be authorized non-stormwater discharges. As part of the Construction General Permit, all dewatering discharges are required to be filtered or treated, using appropriate technology, from sedimentation basins. Authorized non-stormwater dewatering discharges may require a permit because some RWQCBs have adopted General Permits for dewatering discharges. The Central Valley RWQCB has adopted an NPDES Low Threat Discharge and Dewatering General Permit. Therefore, the project applicant or the project applicant's contractor would also need to obtain coverage under this permit, which will require the dewatering discharge to be treated prior to discharge to any local water way.

If dewatering activities lead to discharges to the storm drain system or other water bodies, water treatment measures may be designed and implemented as necessary so that water quality objectives are met prior to discharge to waters of the State. As a performance standard, these measures would be selected to achieve the maximum removal of any contaminant found in the groundwater and would represent the best available technology (BAT) that is economically feasible. Implemented measures may include using infiltration areas and retaining dewatering effluent until particulate matter has settled before the water is discharged. The contractor should perform and document routine inspections of the construction area to verify that the water quality control measures are properly implemented and maintained; the contractor would also conduct and document observations of the water (e.g., check for odors, discoloration, or an oily sheen on groundwater). Other pre-discharge sampling and reporting activities required by the Central Valley RWQCB are typically conducted as necessary. The final selection of water quality control measures would be subject to review by the Central Valley RWQCB, if necessary. If the groundwater is found to not meet water quality standards and treatment measures are not effective, the water may need to be hauled offsite for treatment and disposal at an appropriate waste treatment facility.

Section 404—Dredge/Fill Permitting

The discharge of dredged or fill material into waters of the United States is subject to permitting specified under Title IV (Permits and Licenses) of the CWA and specifically under Section 404 (Discharges of Dredge or Fill Material) of the CWA. Section 404 regulates placement of fill materials into the waters of the United States. Section 404 permits are administered by the U.S. Army Corps of Engineers (USACE).

National Flood Insurance Program

In response to increasing costs of disaster relief, Congress passed the National Flood Insurance Act (NFIP) of 1968 and the Flood Disaster Protection Act of 1973. The purpose of these acts was to reduce the need for large, publicly funded flood control structures and disaster relief by restricting development on floodplains. The Federal Emergency Management Agency (FEMA) administers the NFIP to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA issues flood insurance rate maps (FIRMs) for communities participating in the NFIP. A FIRM is the official map of a community prepared by FEMA to delineate both the special flood hazard areas and the flood risk premium zones applicable to the community.

State

California Water Plan

The California Water Plan is the State's long-term strategic plan for guiding the management and development of water resources under emerging conditions and expectations, and in the face of a uncertainties. The most recent update to the plan, released in 2013, provides a strategic vision and roadmap for California's water future rather than specifying mandates, prioritizing actions, or allocating funding. Volume II of the plan contains regional reports, including one pertaining to the San Joaquin River Hydrological Region and a regional water management strategic vision.

Groundwater Planning Legislation Passed in 2014

Assembly Bill (AB) 1739

AB 1739 requires sustainable groundwater management in all groundwater subbasins determined by the California Department of Water Resources (DWR) to be at medium to high risk of significant economic, social, and environmental impacts due to an unsustainable and chronic pattern of groundwater extractions exceeding the ability of the surface water supplies to replenish the subbasin. Most pertinent to this program, AB 1739 requires, prior to the adoption or any substantial amendment of a general plan, the planning agency to review and consider a groundwater sustainability plan, groundwater management plan, groundwater management court order, judgment, or decree, adjudication of water rights, or a certain order or interim plan by the SWRCB. This bill requires the planning agency to refer a proposed action to adopt or substantially amend a general plan to any groundwater sustainability agency that has adopted a groundwater sustainability plan or local agency that otherwise manages groundwater and to the SWRCB if it has adopted an interim plan that includes territory within the planning area.

Senate Bill (SB) 1168

SB 1168 enacts the Sustainable Groundwater Management Act (SGMA) and states as the intent of the Legislature that, among other things, all groundwater basins and subbasins must be managed sustainably by local entities pursuant to an adopted sustainable groundwater management plan. SB 1168 requires that for all groundwater basins designated as high- or medium-priority basins by DWR agencies must develop and implement a groundwater sustainability plan to be developed and implemented to meet the sustainability goal, established as prescribed, and would require the plan to include prescribed components. This bill encourages and authorizes basins designated as low- or very low priority basins to be managed under groundwater sustainability plans. At this time, no regional management agency has been established.

Table 3.9-1 shows the California Department of Water Resources list of high and medium priority groundwater basins (California Department of Water Resources 2015) within Stanislaus County. They are also shown in Figure 3.9-2.

Table 3.9-1. California Department of Water Resources List of Priority Groundwater Basins within Stanislaus County

Subbasin Name	Subbasin Number	Overall Basin Priority; Status
Modesto	5-22.02	High; monitored
Turlock	5-22.03	High; monitored
Eastern San Joaquin	5-22.01	High; partially unmonitored
Delta-Mendota	5-22.07	High; monitored

Source: California Department of Water Resources 2014.

Senate Bill 5: 200-Year Flood Criteria

Senate Bill 5 (Florez, Wolk, Steinberg, and Laird), implemented in October 2007, required the California Department of Water Resources (DWR) to develop preliminary maps for the 100- and 200-year floodplains in the Sacramento–San Joaquin Valley Watershed by July 1, 2008. The maps provide the best available information on flood protection to cities and counties, showing areas

protected by state and federal project levees and areas outside the protection of project levees. DWR has prepared preliminary 100- and 200-year maps for 32 counties within the Sacramento–San Joaquin Valley Watershed, including Stanislaus County.

Senate Bill 1319

SB 1319 additionally authorizes SWRCB to designate certain high- and medium-priority basins as probationary if, after January 31, 2025, prescribed criteria are met, including that SWRCB determines that the basin is in a condition where groundwater extractions result in significant depletions of interconnected surface waters. This bill adds to the prescribed determinations that would prevent SWRCB from designating the basin as a probationary basin for a specified time period and requires that SWRCB exclude from probationary status any portion of a basin for which a groundwater sustainability agency demonstrates compliance with the sustainability goal.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act authorizes the state to implement the provisions of the CWA and establishes a regulatory program to protect the water quality of the state and the beneficial uses of state waters.

The act requires projects that are discharging, or proposing to discharge, wastes that could affect the quality of the state's water to file a report of waste discharge with the appropriate RWQCB. The Porter-Cologne Act also requires that SWRCB or a RWQCB adopt basin plans for the protection of water quality. Basin plans are updated and reviewed every 3 years and provide the technical basis for determining WDRs, taking enforcement actions, and evaluating clean water grant proposals. A basin plan must include the following sections.

- A statement of beneficial water uses that the RWQCB will protect.
- Water quality objectives needed to protect the designated beneficial water uses.
- Strategies and time schedules for achieving the water quality objectives.

As noted above, the proposed program lies within the jurisdiction of the Central Valley RWQCB, which is responsible for the protection of beneficial uses of water resources in the Central Valley region. The *Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region* (4th edition) was last updated in 2011.

RWQCBs designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect these uses. Consequently, the specific water quality objectives developed for particular water segments are based on the designated use. The Central Valley Water Board Basin Plan specifies region-wide and water body-specific beneficial uses and has set numeric and narrative water quality objectives for several substances and parameters for numerous surface waters in its region. Specific objectives for concentrations of chemical constituents are applied to bodies of water based on their designated beneficial uses. In addition, SWRCB identifies waters failing to meet standards for specific pollutants, which are then state-listed in accordance with CWA Section 303(d). If it is determined that waters of the State are impaired for one or more constituents and the standards cannot be met through point-source or nonpoint-source point controls (NPDES permits or WDRs), the CWA requires the establishment of TMDLs.

California Department of Fish and Game 1602 Streambed Alteration Agreement

Under Chapter 6 of the California Fish and Game Code, the California Department of Fish and Wildlife (CDFW) is responsible for the protection and conservation of the state's fish and wildlife resources. Section 1602 et seq. of the code defines the responsibilities of CDFW and requires that public and private applicants obtain an agreement to "divert, obstruct, or change the natural flow or bed, channel, or bank of any river, stream, or lake designated by the CDFW in which there is at any time an existing fish or wildlife resource or from which those resources derive benefit, or will use material from the streambeds designated by the department." A streambed alteration agreement is required under Section 1602 of the California Fish and Game Code for all activities that involve temporary or permanent activities within state jurisdictional waters.

Regional

Central Valley Flood Protection Plan

SB 5 required DWR and the Central Valley Flood Protection Board (CVFPB) to prepare and adopt a Central Valley Flood Protection Plan (CVFPP) and establish flood protection requirements for local land use decisions consistent with the CVFPP. The public draft was circulated in December 2011. The CVFPP serves as the guiding document for managing flood risk along the Sacramento and San Joaquin river systems. The CVFPP proposes a system-wide investment approach for sustainable, integrated flood management in areas currently protected by facilities of the State Plan of Flood Control. The CVFPP is to be updated every 5 years, with each update providing support for subsequent policy, program, and project implementation. In addition to the development of the CVFPP, SB 5 requires that the 100- and 200-year floodplains maps be developed using the best information available.

Local

Stanislaus Groundwater Management Action Plan

Policies in the County Groundwater Management Action Plan related to hydrology and water quality that apply to the proposed program are as follows.

Governance (G-1) Participate in the development and adoption of a Groundwater Sustainability Plans for all groundwater basins in Stanislaus County, consistent with SGMA.

Governance (G-2) Adopt General Plan (cities and County) changes to protect groundwater recharge areas and to manage or mitigate land use that has an impact on groundwater use and quality.

Governance (G-3) Evaluate existing IRWMP's [Integrated Regional Water Management Plan] with regard to their relevance to sustainable groundwater management activities that enhance water supply and protects water quality.

Governance (G-4) Discuss and develop alternate institutional mechanisms for integrated groundwater management strategies with the existing groundwater management planning agencies and associations in conformance with SGMA and the creation of Groundwater Sustainability Agencies.

Governance (G-5) Systematically evaluate and integrate existing Urban Water Management Plans, Agricultural Water Management Plans, and Groundwater Management Plans into a single, integrated, county-wide water management plan focused on sustainable groundwater management programs, practices and projects and which includes robust performance metrics and implementation schedule.

Stanislaus County General Plan

The Conservation/Open Space Element and the Safety Element of the Stanislaus County General Plan provides goals and policies related to hydrology and water quality.

Land Use Element

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY FOUR. Urban development shall be discouraged in areas with growth-limiting factors such as high water table or poor soil percolation, and prohibited in geological fault and hazard areas, flood plains, riparian areas, and airport hazard areas unless measures to mitigate the problems are included as part of the application.

POLICY EIGHT. The County will continue to provide proper ordinances to ensure that flood insurance can be made available to qualified property owners through state and federal programs.

Conservation/Open Space Element

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.

POLICY SIX. Preserve vegetation to protect waterways from bank erosion and siltation.

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.

POLICY EIGHT. The County shall continue and, if necessary, expand the water monitoring program of the Stanislaus County Department of Environmental Resources.

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

Safety Element

GOAL ONE. Prevent loss of life and reduce property damage as a result of natural disasters.

POLICY TWO. Development should not be allowed in areas that are within the designated floodway.

GOAL TWO. Minimize the effects of hazardous conditions that might cause loss of life and property.

POLICY NINE. The County shall support the formation of improvement districts (including flood control districts) to eliminate safety hazards.

POLICY FIFTEEN. The County will support the Federal Emergency Management Agency (FEMA) Flood Insurance Program so that residents who qualify may purchase such protection.

Agricultural Element

GOAL THREE. Protect the natural resources that sustain our agricultural industry.

OBJECTIVE 3.2. Water Resources.

POLICY 3.4. The County shall encourage the conservation of water for both agricultural and urban uses.

Existing Conditions

Climate and Topography

Stanislaus County is located within the northern portion of the San Joaquin Valley, in the southern portion of the Central Valley. San Joaquin Valley is bordered on the west by the Coast Range and to the east by the Sierra Nevada foothills. The climate of the region is Mediterranean with hot, dry summers and cool, wet winters. Average annual precipitation in the county is 13 inches (California Department of Water Resources 2003).

Surface Water

DWR has divided the state into ten hydrologic regions, corresponding to the state's major water drainage basins. The proposed program is entirely within the San Joaquin River Hydrologic Region (California Department of Conservation 2007). The San Joaquin River Hydrologic Region covers approximately 9.7million acres (15,200 square miles) and includes all of Calaveras, Tuolumne, Mariposa, Madera, San Joaquin, and Stanislaus counties; most of Merced and Amador counties; and parts of Alpine, Fresno, Alameda, Contra Costa, Sacramento, El Dorado, and San Benito counties. The basin includes all watersheds tributary to the San Joaquin River and the Delta south of the Sacramento River and south of the American River watershed. (California Department of Water Resources 2003.)

The San Joaquin River is the principal river of the region and all other streams are tributary to it. Its larger tributaries include the Cosumnes, Mokelumne, Calaveras, Stanislaus, Tuolumne, Merced, Chowchilla, and Fresno rivers. Of these surface water features, major features that cross Stanislaus County include the San Joaquin, Stanislaus, and Tuolumne rivers, all of which originate in the Sierra Nevada Mountains. The Stanislaus and Tuolumne rivers eventually discharge into the San Joaquin River, which extends to the San Francisco Bay-Delta estuary. See Figure 3.9-1 for an overview of surface water resources in Stanislaus County.

Major reservoirs and lakes in the basin include the Pardee, New Hogan, Millerton, McClure, Don Pedro, and New Melones. However, none of these lakes or reservoirs lie within county boundaries. Smaller reservoirs in the basin that do lie within county lines include the Woodward, Turlock, La Grande, and Modesto reservoirs.

The California Aqueduct, Hetch Hetchy Aqueduct, and the Delta Mendota Canal also cross the county along its western edge (California Department of Water Resources 2003).

According to the EPA, Stanislaus County crosses portions of ten watersheds or U.S. Geological Survey (USGS) Hydrologic Units (U.S. Environmental Protection Agency 2014).

- USGS Hydrologic Unit Code [HUC] #18040001 Middle San Joaquin-Lower Chowchilla; state(s): CA
- USGS HUC #18040002 Middle San Joaquin-Lower Merced-Lower Stan; state(s): CA
- USGS HUC #18040004 Lower Calaveras-Mormon Slough; state(s): CA
- USGS HUC #18040008 Upper Merced; state(s): CA
- USGS HUC #18040009 Upper Tuolumne; state(s): CA
- USGS HUC #18040010 Upper Stanislaus; state(s): CA

- USGS HUC #18040014 Panoche-San Luis Reservoir; state(s): CA
- USGS HUC #18050003 Coyote; state(s): CA
- USGS HUC #18050004 San Francisco Bay; state(s): CA
- USGS HUC #18060002 Pajaro; state(s): CA

Groundwater

Groundwater resources in the San Joaquin River Hydrologic Region include both alluvial and fractured rock aquifers. Alluvial aquifers consist of sand and gravel or finer grained sediments, with groundwater stored within the pore space between the alluvial sediments. Fractured-rock aquifers are composed of impermeable granitic, metamorphic, volcanic, and hard sedimentary rocks, with groundwater stored between cracks, fractures, or other void spaces.

In the San Joaquin River Hydrologic Region, there are 11 alluvial groundwater basins and subbasins recognized under Bulletin 118 Update 2003 by the DWR. Stanislaus County is located within the San Joaquin Valley Basin and overlies portions of the Modesto, Turlock, Eastern San Joaquin, and Delta-Mendota subbasins.

The Modesto Subbasin (Basin Number 5-22.02) has a total surface area of 247,000 acres (385 square miles). It lies between the Stanislaus River to the north and Tuolumne River to the south and between the San Joaquin River on the west and crystalline basement rock of the Sierra Nevada foothills on the east. The northern, western, and southern boundaries are shared with the Eastern San Joaquin Valley, Delta-Mendota, and Turlock Groundwater subbasins, respectively. Groundwater flow is primarily to the southwest, following the regional dip of basement rock and sedimentary units. The lower to middle reaches of the Stanislaus and Tuolumne rivers in the subbasin appear to be gaining streams with groundwater flow into both, especially the Tuolumne River (California Department of Water Resources 2004).

The Turlock Subbasin (Basin Number 5-22.03) has a total surface area of 347,000 acres (542 square miles). It lies between the Tuolumne and Merced rivers and is bounded on the west by the San Joaquin River and on the east by crystalline basement rock of the Sierra Nevada foothills. The northern, western, and southern boundaries are shared with the Modesto, Delta-Mendota, and Merced Groundwater subbasins, respectively. Similar to the Modesto Subbasin, groundwater flow is primarily to the southwest, following the regional dip of basement rock and sedimentary units. Based on recent groundwater measurements, a paired groundwater mound and depression appear beneath the city of Turlock and to its east, respectively. (California Department of Water Resources 2006a).

The Eastern San Joaquin Subbasin (Basin Number 5-22.01) has a total surface area of 707,000 acres (1,105 square miles). The subbasin is by the Mokelumne River on the north and northwest; San Joaquin River on the west; Stanislaus River on the south; and consolidated bedrock on the east. The Eastern San Joaquin Subbasin is bounded on the south, southwest, and west by the Modesto, Delta-Mendota, and Tracy subbasins, respectively, and on the northwest and north by the Solano, South American, and Cosumnes subbasins. The subbasin is drained by the San Joaquin River and its major tributaries, the Stanislaus, and Calaveras, and Mokelumne rivers. The San Joaquin River flows northward into the Sacramento and San Joaquin Delta and discharges into the San Francisco Bay. Due to the continued overdraft of groundwater within the subbasin, significant groundwater

depressions are present below the City of Stockton, east of Stockton, and east of Lodi (California Department of Water Resources 2006b).

The Delta-Mendota Subbasin (Basin Number 5-22.07) has a total surface area of 747,000 acres (1,170 square miles). The Delta-Mendota subbasin is bounded on the west by the Coast Ranges, on the north by the Stanislaus/San Joaquin county line, on the east by the San Joaquin River and the Chowchilla Bypass, and on the south along the Fresno Slough (California Department of Water Resources 2006c).

Water Quality

Surface Water

Surface water quality for the three major Stanislaus County rivers¹ is excellent at their sources in the Sierra Nevada Mountains. However, as each river flows through the San Joaquin Valley water quality declines by each successive use. Agricultural and domestic use-and-return both contribute to water quality degradation. During dry summer months, the concentration of pollutants increase, particularly in the San Joaquin River, which drains domestic and industrial wastewater for the entire San Joaquin Valley. Water quality in the Stanislaus and Tuolumne rivers declines significantly by the time they discharge into the San Joaquin River. Comparatively, water quality declines more in the Tuolumne River than the Stanislaus River from agricultural wastewater returns and gas well wastes. (County of Stanislaus General Plan.)

The EPA's 2010 303(d) list of impaired water bodies lists the San Joaquin, Stanislaus, and Tuolumne rivers as impaired from various pollutants/stressors (see Table 3.9-2).

Table 3.9-2. Impaired Water Bodies in the Project Area

River	Pollutant/Stressor	Source	TMDL Completion Date
Stanislaus River	Chlorpyrifos	Agriculture	Estimated 2021
	Diazinon	Agriculture	2008
	Group A Pesticides	Agriculture	2011
	Mercury	Resource Extraction	Estimated 2020
	Temperature	Unknown	Estimated 2021
	Unknown Toxicity	Unknown	2019
Tuolumne River	Chlorpyrifos	Agriculture	Estimated 2021
	Diazinon	Agriculture	2008
	Group A Pesticides	Agriculture	2011
	Mercury	Resource Extraction	Estimated 2020
	Temperature	Unknown	Estimated 2021
	Unknown Toxicity	Unknown	2019
San Joaquin River	Boron	Agriculture	Estimated 2019
	Chlorpyrifos	Agriculture	2007
	DDT (dichlorodiphenyltrichloroethane)	Agriculture	2011
	Diazinon	Agriculture	2010
	Electrical Conductivity	Agriculture	Estimated 2021

¹ San Joaquin, Stanislaus, and Tuolumne rivers.

River	Pollutant/Stressor	Source	TMDL Completion Date
	Group A Pesticides	Agriculture	2011
	Mercury	Resource Extraction	2012
	Alpha-BHC	Unknown	Estimated 2022
	DDE (dichlorodiphenyldichloroethylene)	Agriculture	2011
	Temperature	Unknown	Estimated 2021
	Unknown Toxicity	Unknown	2019

Source: California Environmental Protection Agency (2010).

Groundwater

Groundwater quality throughout the San Joaquin Valley region is suitable for most urban and agricultural uses. However, there are areas of localized problematic areas with the following primary constituents of concern: high total dissolved solids (TDS)), nitrates, boron, chloride, arsenic, selenium, dibromochloropropane (DBCP), and radon (U.S. Bureau of Reclamation 2011).

Groundwater quality declines along the west side of the San Joaquin Valley and in the trough of the valley. Groundwater in the west side of the San Joaquin Valley in general has a high TDS content due to recharge of streamflow originating from marine sediments in the Coast Range. High TDS content in the trough of the valley is the result of the concentration of salts from agricultural practices due to evaporation and poor drainage. (California Department of Water Resources 2003)

The major human sources of nitrates are disposal of human and animal waste products and fertilizers. Nitrates may also occur naturally. High concentrations of boron and chloride are likely a result of concentration from evaporation near the valley trough. Contamination from organic compounds comes from agricultural and industrial sources. Agricultural pesticides and herbicides have been detected in groundwater throughout the region. A major contaminant of concern is dibromochloropropane, a now-banned soil fumigant and known carcinogen once used extensively on grapes and cotton. Industrial contaminants including trichloroethylene, dichloroethylene, and other solvents have been found in groundwater near airports, industrial areas, and landfills. (California Department of Water Resources 2003)

The Eastern San Joaquin Subbasin has experienced substantial groundwater quality degradation. As a result of declining water levels, poor quality water has been moving east along a 16-mile front on the east side of the Delta. The degradation was especially evident in the Stockton area where the saline front was moving eastward at a rate of 140 to 150 feet per year. Data from 1980 and 1996 indicate that the saline front has continued to migrate eastward up to about 1 mile beyond its 1963 extent. Large areas of elevated nitrate in groundwater exist within the subbasin located southeast of Lodi and south of Stockton and east of Manteca extending towards the San Joaquin–Stanislaus County line. (California Department of Water Resources 2006a)

Flooding

Flood risks in the Sacramento–San Joaquin Valley are among the highest in the nation. This risk endangers approximately 1,000,000 people and \$70 billion in infrastructure, homes, and businesses. To reduce this risk, the Central Valley Flood Protection Act (CVFPA) of 2008 directed DWR to prepare the CVFPP for Central Valley Flood Protection Board adoption. The CVFPP provides conceptual guidance to reduce the risk of flooding with a goal of providing 200-year (1 chance in

200 of flooding in any year) protection to urban areas, and reducing flood risks to small communities and rural agricultural lands (Central Valley Flood Protection Board 2012). Figure 3.9-1 shows the areas located in 200-year floodplains.

The Central Valley Flood Protection Board maintains jurisdiction over four regulated streams, including: Dry Creek from the Tuolumne River to the Atchison, Topeka and Santa Fe Railway, Laird Slough, Stanislaus River, and Tuolumne River. In Stanislaus County, existing dams on the Tuolumne and Stanislaus rivers substantially reduce the risk of flooding on surrounding lands. However, major flooding tends to occur along the San Joaquin River and isolated stretches of the Tuolumne River, as well as on Orestimba, Salado, and Sand creeks. Portions of the Stanislaus River still flood to the extent that there can be crop damage, but the USACE has purchased flowage easements so that they have the "right" to flood this area.

Widespread flooding also can result from dam failure. The most common cause of dam failure is prolonged rainfall that produces flooding, although other causes include natural events such as earthquakes or landslides. In the event of dam failure, inundation could affect the cities of Waterford, Hughson, Oakdale, Riverbank, and Modesto.

In the Modesto, Turlock, and Woodward Reservoirs, an earthquake of sufficient magnitude could cause a seiche, or standing wave, in which case people using a reservoir for recreation would be at risk. However, personnel at the reservoirs are trained to handle water-related emergencies, and no privately owned residences are located along the shores. As an inland region separated from the Pacific Ocean by the Coast Range, Stanislaus County is at no risk of tsunamis. (Stanislaus County General Plan Safety Element)

3.9.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan updates; the individual impacts relative to the thresholds of significance; mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and the overall significance of the impact with mitigation incorporated.

Major Sources Used in Analysis

The major sources used in this analysis are listed below:

- California Water Plan (<http://www.waterplan.water.ca.gov/cwpu2013/final/>).
- Central Valley Regional Water Quality Control Board (<http://www.waterboards.ca.gov/centralvalley/>).
- SWRCB's list of impaired water bodies (http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml).
- DWR's "best available maps" of 200-year flood zones (<http://gis.bam.water.ca.gov/bam/>).
- DWR's Levee Flood Protection Zone maps (http://www.water.ca.gov/floodmgmt/lrafmo/fmb/docs/SanJoaquinRiver_LFPZ_Map.pdf).

Approach and Methodology

Impacts related to hydrology, water quality, and water resources were assessed based on technical reports prepared for the proposed project, other available data (e.g., maps, soil surveys), and professional judgment.

Potential impacts resulting from implementing the proposed project were analyzed by comparing existing conditions, as described in the *Environmental Setting*, to conditions during construction and/or operation and maintenance of the program. The analysis assesses the direct, indirect, short-term, and long-term impacts related to surface hydrology, flood hazards, groundwater recharge, and surface and groundwater quality as described below.

- **Surface Water Hydrology:** The surface water hydrology impact analysis considered potential changes in the physical characteristics of water bodies, impervious surfaces, and drainage patterns throughout the project area as a result of project implementation.
- **Flood Hazards:** The impact analysis for flood risk was conducted using FEMA NFIP maps to determine whether the project area overlaps with existing designated 100-year and 200-year floodplains.
- **Groundwater Recharge:** Impacts on groundwater recharge were assessed by comparing existing sources of recharge versus recharge capabilities following project implementation. Recharge is determined by the ability of water to infiltrate into the soil. Although the extent of the groundwater aquifer is unknown within the project area due to lack of data from DWR, this analysis assumes that groundwater exists within the entire project area.
- **Surface and Groundwater Quality:** Impacts of the proposed project on surface water and groundwater quality were analyzed using existing information on existing water quality conditions (i.e., 303[d] listed water bodies). These conditions were then compared to conditions under the proposed project for potential project-related sources of water contaminants generated or inadvertently released during project construction (e.g., sediments, fuel, oil, concrete) and operation. The potential for water quality objectives to be exceeded and beneficial uses to be compromised as a result of the proposed project was also considered.

Thresholds of Significance

Based on State CEQA Guidelines Appendix G, the plan update would have a significant impact with respect to hydrology and water quality if it would result in any of the following.

- Violate any water quality standards or waste discharge requirements.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted).
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite.

- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Otherwise substantially degrade water quality.
- Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows.
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
- Contribute to inundation by seiche, tsunami, or mudflow.

Impacts and Mitigation Measures

Impact HYD-1: Violate any water quality standards or waste discharge requirements (less than significant)

Construction

Implementation of the general plan, including the new policies in the general plan update, would result in additional construction within Stanislaus County. Typical construction-related earth-disturbing activities would introduce the potential for increased erosion, runoff, and sedimentation, with subsequent effects on water quality and storm drain capacity. During site grading, trenching, and other construction activities, areas of bare soil are exposed to erosive forces during rainfall events. Bare soils are much more likely to erode than vegetated areas because of the lack of dispersion, infiltration, and retention properties created by covering vegetation. The extent of the impacts is dependent on soil erosion potential, type of construction practice, extent of disturbed area, timing of precipitation events, and topography and proximity to drainage channels. In addition, construction equipment and activities would have the potential to leak hazardous materials, such as oil and gasoline, and potentially affect surface water or groundwater quality. Improper use or accidental spills of fuels, oils, and other construction-related hazardous materials such as pipe sealant, solvents, and paints could also pose a threat to the water quality of local water bodies. These potential leaks or spills, if not contained, would be considered a significant impact on groundwater and surface water quality. If precautions were not taken to contain or capture sediments and/or accidental hazardous spills, construction activities could produce substantial pollutants in stormwater runoff and result in a significant impact on the existing surface water quality.

Projects that would disturb more than 1 acre of land are required to prepare a SWPPP as part of compliance with the NPDES Construction General Permit. The purpose of a SWPPP is to reduce the amount of construction-related pollutants that are transported by stormwater runoff to surface waters. The SWPPP will emphasize standard temporary erosion control measures to reduce sedimentation and turbidity of surface runoff from disturbed areas within the project area.

In addition to compliance with the latest NPDES and other water quality requirements (i.e., Construction General Permit, Small MS4 Permit, and the General Dewatering Permit) construction projects would also comply with other federal and state regulations, County plan standards, and other local ordinances, as noted in the *Regulatory Setting* above.

Construction dewatering in areas of shallow groundwater may be required during excavation for some construction projects. In the event groundwater is encountered during construction, dewatering would be conducted locally, and according to the dewatering permit obtained by the Central Valley RWQCB, as described in the *Regulatory Setting* above. In areas where groundwater is shallow and there is potential to affect riparian habitat, features would be installed using the vibration method, which minimizes subsurface disruption.

Therefore, potential water quality impacts, such as violations of water quality objectives or WDRs from construction activities, would be less than significant. No mitigation is required.

Operations

Urban stormwater runoff from existing and future development, as well as discharges of waters from storm drains into natural water bodies, can contain a variety of pollutants, including household chemicals, landscape chemicals, heavy metals, and other substances. Agricultural and animal confinement operations, industrial activities, and mining and dredging operations that would continue under the general plan update have the potential to release nutrients, chemical pollutants, and excess sediment into nearby waterways, degrading surface and groundwater quality over the long term.

Several general plan update changes are pertinent to this impact.

Conservation/Open Space Element

GOAL TWO. Conserve water resources and protect water quality in the County.

POLICY EIGHT. The County shall support ~~continue and, if necessary, expand the water monitoring program of the efforts of the Stanislaus County Department of Environmental Resources 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 ~~various grants~~ funding options to improve water ~~management resources~~ quality in the County.
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.
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.
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.
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.

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.
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.
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.

Agricultural Element

GOAL THREE. Protect the natural resources that sustain our agricultural industry.

OBJECTIVE 3.2. Water Resources.

POLICY 3.6. The County will continue to protect local groundwater for agricultural, rural domestic, and urban use in Stanislaus County.

Development of these management efforts as proposed in the general plan update's goals and policies would minimize the potential for the release of pollutants and violation of water quality standards. Furthermore, additional regional, state, and federal regulations would also reduce the potential for violation of water quality standards.

Water quality protection measures are enforced by the Central Valley RWQCB under various NPDES programs for municipal separate storm sewer systems, construction sites greater than 1 acre, and industrial operations. These programs are either in the process of being, or recently have been, upgraded to include more rigorous standards, WDRs, and methods for meeting water quality objectives based on current data and understanding. Stanislaus County has implemented their Storm Water Management Program under the NPDES Phase II MS4 General Permit that includes programs to eliminate illicit discharges, control construction site stormwater runoff, and meet post-construction stormwater runoff goals to improve water quality protection.

Adherence with the stormwater management plan and the various municipal, industrial, and construction NPDES program requirements would ensure that pollutants are not released to nearby surface water bodies or groundwater during short-term construction efforts, or long-term operation of industrial or agricultural facilities. Therefore, this impact would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact HYD-2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted) (significant and unavoidable)

Groundwater overdraft from pumping and drought conditions is a recurring problem in parts of Stanislaus County. Increases in population and corresponding increases in groundwater use have resulted in a lower groundwater table in some areas of the Modesto Subbasin and may have contributed to groundwater degradation, especially within the boundaries of the City of Modesto. In response to this degradation, six agencies covering the Modesto Groundwater Subbasin formed the

Stanislaus and Tuolumne Rivers Groundwater Basin Association to provide a forum for coordinated planning and management of the subbasin (Stanislaus and Tuolumne Rivers Groundwater Basin Association 2005). This association developed the Integrated Regional Groundwater Management Plan to coordinate planning to make the best use of groundwater.

Development under the general plan update in urban areas could result in increased reliance on groundwater to supplement supply from surface water. Furthermore, increased urban development could potentially reduce localized groundwater recharge due to increased impervious surfaces and the redirection of stormwater runoff. A potential decrease in aquifer volumes could adversely affect existing users or habitat needs.

Impacts on groundwater from future development would be reduced by implementation of the general plan update. Implementation of Goal Two and the proposed amendments to Policy Eight of the Conservation/Open Space Element and the related amended and new Implementation Measures (see Impact HYD-1) would result in the development of a groundwater usage tracking system, including well location/construction mapping (within the extent that prevailing law allows) and additional groundwater level monitoring, to guide future policy development. This tracking system would minimize the potential for overdraft that could result in subsidence and groundwater quality issues. With Policy Eight, the Department of Environmental Resources would 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. Goal Three, Policy 3.4 of the Agricultural Element would further reduce groundwater impacts.

GOAL THREE. Protect the natural resources that sustain our agricultural industry.

OBJECTIVE 3.2. Water Resources.

POLICY 3.4. The County shall encourage the conservation of water for both agricultural, rural domestic, and urban uses.

IMPLEMENTATION MEASURE

5. The County shall encourage the development and use of appropriately treated water (reclaimed wastewater and stormwater) for both agricultural and urban irrigation.

Furthermore, in addition to policies in the general plan update, statewide groundwater management legislation was passed in 2014 with a long-term goal of reducing overdraft (AB 1739 and SB 1168). As per this legislation, Stanislaus County will cooperate with other agencies in preparation of a groundwater sustainability plan complying with the content requirements established in Water Code Section 10727.2 and 10727.4. The groundwater management plan will include specific actions to avoid overdraft throughout each of the subbasins within Stanislaus County within 20 years of adoption of the plan. (Water Code Section 10727.2, subsections (b) and [d]) Proposed Implementation Measures 6 through 8 under Policy Eight under Goal Two of the Conservation/Open Space Element (Impact HYD-1) would commit the County to regional cooperation and the dissemination of groundwater information to guide future planning activities.

Impacts would be less than significant in the long term, once the groundwater sustainability plan takes effect and is implemented. However, the impact would be significant and unavoidable within the general plan's 2035 planning horizon because of the severity of the problem and the delay inherent in organizing and preparing the groundwater sustainability plan. This impact would be significant during the interim period before adoption and full implementation of the groundwater sustainability plan.

There is no feasible mitigation for the interim period before adoption and implementation of the groundwater sustainability plan.

Significance without Mitigation: Significant and unavoidable

Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite (less than significant)

Within Stanislaus County, many natural drainage and stream networks have been modified, diverted, or controlled in an effort to contain floodwaters and provide for agricultural irrigation. In many cases, this modification has led to increased erosion and siltation through removal of riparian vegetation or hydrologic changes that result in increased velocities. Implementation of the General plan update could lead to continued development that could further alter natural drainages or streams, resulting in localized flooding or accelerated erosion and increased sediment loading downstream from increased, concentrated, or redirected runoff.

Goal Two, Policy Six of the Conservation/Open Space Element would minimize this impact.

GOAL TWO. Conserve water resources and protect water quality in the County.

POLICY SIX. Preserve natural vegetation to protect waterways from bank erosion and siltation.”

Preservation of natural vegetation would help protect waterways from bank erosion and siltation. Implementation measures of Policy Six would require development proposals and mining activities including or in the vicinity of waterways and/or wetlands to be closely reviewed to ensure that destruction of riparian habitat and vegetation is minimized. Through implementation of this review in combination with other state and federal regulations such as the NPDES Construction General Permit and the MS4 Permit, this impact would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact HYD-4: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite (less than significant)

Development of project components under the general plan update such as roads and houses would alter surface drainage by adding impermeable surfaces, directly altering flow patterns, or placing structures in a flood-prone area, all of which could yield increased amounts of stormwater runoff. Proposed project activities that convert permeable surfaces or install permanent structures would require stormwater drainage management measures to avoid flooding impacts.

Safety Element

GOAL TWO. Minimize the effects of hazardous conditions that might cause loss of life and property.

POLICY EIGHT. Roads shall be maintained for the safety of travelers.

MINIMIZATION MEASURE

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.).

This measure would minimize the impact. As per the 2014 Stanislaus County Standards & Specifications Update, these drainage systems would be designed using a 100-year, 24-hour storm with a rainfall intensity of 2.88 inches (Stanislaus County 2014). This specification ensures stormwater detention or retention facilities onsite attenuate peak stormwater runoff to a level that does not affect downstream facilities. In addition, the County's existing MS4 Permit requires the implementation of its 2015 Post Construction Standards Plan to control the volume, rate, and duration of runoff to avoid upstream and downstream flooding. With the incorporation of the strategies described above, and adherence to the requirements of the County Standards and Specifications and the County's existing MS4 Permit, this impact would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact HYD-5: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff (less than significant)

As with Impact HYD-4, development of project components under the general plan update such as roads and houses would alter surface drainage by adding impermeable surfaces; this could yield increased amounts of stormwater runoff polluted by urban and rural land uses. Goal Two, Policy Eight of the Conservation/Open Space Element (Impact HYD-1) and existing regulations would minimize this impact.

The goals of programs would be to minimize the potential for the release of pollutants and violation of water quality standards. The County would follow its 2015 Comprehensive Storm Water Education and Outreach Plan. Preventive components of this plan would include local outreach to promote management practices that reduce polluted runoff. Existing regulations would require the attenuation of peak stormwater volume and rate, which would reduce the collection and spread of pollutants. Furthermore, existing regulations would require the implementation of best management practices during activities likely to cause stormwater pollution such as construction. Impacts would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact HYD-6: Otherwise substantially degrade water quality (less than significant)

In contrast to Impact HYD-1, which discusses impacts involving violations of water quality objectives and standards, this impact addresses "other" water quality impacts, such as those that can result from wetland dredge and fill. Goal Two, Policy Six of the Conservation/Open Space Element addresses the preservation of wetlands.

GOAL TWO. Conserve water resources and protect water quality in the County.

POLICY SIX. Preserve natural vegetation to protect waterways from bank erosion and siltation."

MINIMIZATION MEASURE

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.

The rigorous review required for developments in or within the vicinity of wetlands in addition to the implementation of 2014 Standards and Specifications would minimize impacts on wetlands. 2014 Standards and Specifications requires that best management practices be implemented to ensure that wetlands are not negatively impacted from construction activities. Impacts would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact HYD-7: Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map (less than significant)

The best available maps, as provided by the DWR, show 100- and 200- year flood plains are located along the banks of the Tuolumne and San Joaquin Rivers (see Figure 3.9-3). This affects a relatively small portion of the unincorporated area south and east of the Modesto Airport along the Tuolumne River that is available for potential development. Notably, substantial areas of the cities of Ceres and Modesto lie within the same 200-year floodplain. (Department of Water Resources 2015) Development under the general plan update could lead to urban or other development that could be inconsistent with state flood control programs and regulations in areas subject to a 200-year flood event.

Legislation adopted by the State of California, and flood planning required by the legislation, is strengthening flood protection oversight and requirements within the San Joaquin Valley, including within Stanislaus County. Two state agencies, DWR and the Central Valley Flood Protection Board adopted the CVFPP in 2012. The CVFPP and key legislation under the 2008 CVFPA set a higher standard for a 200-year level of flood protection. Key requirements of the CVFPP are that local governments within the San Joaquin Valley, including Stanislaus County, modify their general plans and zoning codes to be consistent with state flood management requirements.

The general plan update incorporates the essential requirements of this legislation

Safety Element

GOAL ONE. Prevent loss of life and reduce property damage as a result of natural disasters.

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.

IMPLEMENTATION MEASURE

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).

Implementation Measure 3 will require the County amend its zoning ordinance to comply with the Central Valley Flood Protection Act of 2008 and any subsequent amendments. Therefore, the impact is less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact HYD-8: Place within a 100-year flood hazard area structures that would impede or redirect flood flows (less than significant)

As shown in Figure 3.9-3 100- and 200-year flood plains are mostly located along the banks of the Stanislaus and San Joaquin rivers. Under the proposed Goal One, Policy Two of the Safety Element, development is not allowed in areas that are within the designated floodway (Impact HYD-1). Under the general plan update, this policy would continue to be implemented. Therefore, impacts would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact HYD-9: Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam (less than significant)

Dam failure is the collapse or failure of an impoundment that causes significant downstream flooding. Flooding of the area below the dam may occur as the result of structural failure or overtopping of the dam. A severe storm, earthquake, or erosion of the embankment and foundation leakage may cause the collapse and structural failure of dams in or adjacent to Stanislaus County. Three major dams have a direct effect on Stanislaus County: LaGrange, Don Pedro, and New Melones. Levee failure and ensuing inundation also poses a risk to the project area, because there is a system of levees along the San Joaquin River.

Future development under the general plan update could result in an increase in the number of persons and property potentially at risk from flooding due to a catastrophic levee or dam failure. However, compliance with the requirements of existing emergency management plans and the CVFPA, coupled with implementation of the general plan update Safety Element policies associated with Goal One ("Prevent loss of life and reduce property damage as a result of natural disasters"), and as described above, would reduce this potential effect to less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact HYD-10: Contribute to inundation by seiche, tsunami, or mudflow (less than significant)

The county is not at risk due to inundation from a tsunami because of its distance from the ocean. However, there is a risk of seiche from major bodies of water such as the Woodward, Turlock, and Modesto reservoirs. However, given the relatively small size of these reservoirs, potential impacts would remain localized to recreational users on these reservoirs. Depending on the season and time of day, this could affect very few users. The county also possesses a geologic and climate setting not particularly prone to mud flows. Accordingly, impacts would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

3.9.4 References Cited

Printed References

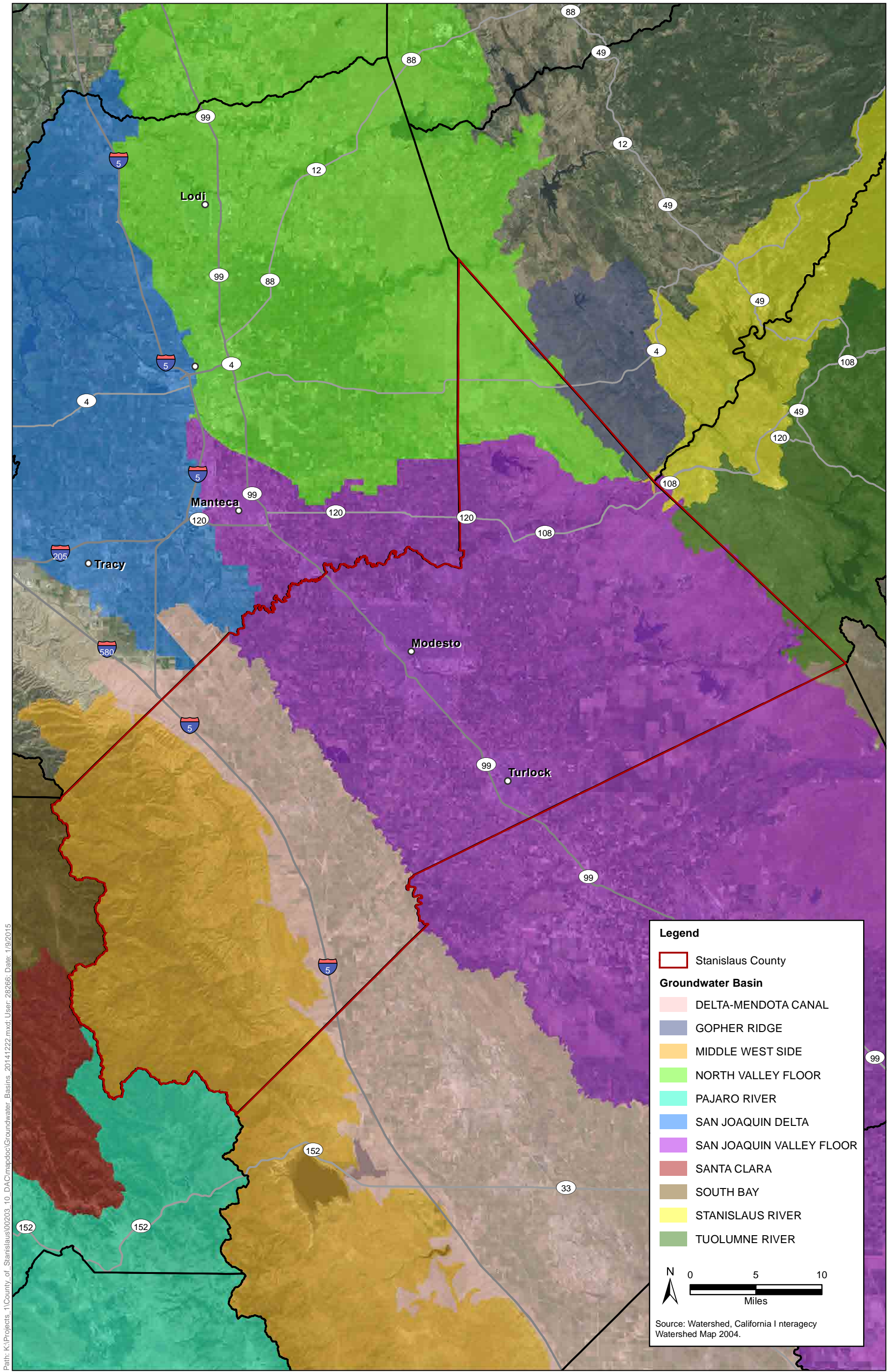
- California Department of Conservation. 2007. *Hydrologic Regions*. Sacramento, CA. Available: http://www.conservation.ca.gov/dlrp/watershedportal/InformationResources/Documents/WS_huc10_regions8_26_10.pdf.
- California Department of Water Resources. 2003. *California's Groundwater Update: DWR Bulletin 118*. Sacramento, CA. Available: http://www.water.ca.gov/groundwater/bulletin118/update_2003.cfm.
- . 2004. *DWR Bulletin 118: Modesto Subbasin*. Sacramento, CA. Available: http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/5-22.02.pdf.
- . 2006a. *DWR Bulletin 118: East San Joaquin Subbasin*. Sacramento, CA. Available: http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/5-22.01.pdf.
- . 2006b. *DWR Bulletin 118: Turlock Subbasin*. Sacramento, CA. Available: http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/5-22.03.pdf.
- . 2006c. *DWR Bulletin 118: Delta-Mendota Subbasin*. Sacramento, CA. Available: <http://www.water.ca.gov/groundwater/bulletin118/basindescriptions/5-22.07.pdf>. Accessed: 10/19/15.
- . 2014. CASGEM Groundwater Basin Prioritization Results Sorted by Basin Name. Status as of 05/26/2014. Available: http://www.water.ca.gov/groundwater/casgem/basin_prioritization.cfm. Accessed: 10/19/15.
- . 2015. *Department of Water Resources Best Available Maps*. Available: <http://gis.bam.water.ca.gov/bam/>. Accessed: February 9, 2015.
- California Environmental Protection Agency. 2010. *2010 Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report*. Available: http://www.waterboards.ca.gov/water_issues/programs/tmdl/303d_lists2006_epa.shtml.
- Central Valley Flood Protection Board. 2012. *Central Valley Flood Protection: Implementing SB5*. Sacramento, CA. Available: http://www.water.ca.gov/floodsafe/docs/Central_Valley_Flood_Protection_Plan.pdf.
- Stanislaus and Tuolumne Rivers Groundwater Basin Association. 2005. *Final Integrated Regional Groundwater Management Plan*. Sacramento, CA. Available: <https://www.modestogov.com/uppd/reports/water/masterplans/irgmp/FINAL%20IRGMP.pdf>.
- Stanislaus County. 2014. *Standards and Specifications*. Modesto, CA. Available: http://www.stancounty.com/publicworks/pdf/2014_imp_stand.pdf.
- U.S. Bureau of Reclamation. 2011. San Joaquin River Restoration Program. Program Environmental Impact Statement/Report. Draft. April. Available; http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=7560. Accessed: 10/19/15.

U.S. Environmental Protection Agency. 2010. *Integrated Report Clean Water Act 303(d) List*. Sacramento, CA. Available: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml.



Path: K:\Projects_1\County_of_Stanislaus\00203_10_DAC\mapdoc\Hydro_Features_20141217.mxd; User: 28266; Date: 1/9/2015

Figure 3.9-1
Hydrological Features within the Project Vicinity



Path: K:\Projects_1\County_of_Stanislaus\00203_10_DAC\mapdoc\Groundwater_Basins_20141222.mxd; User: 28266; Date: 1/9/2015

Legend

- Stanislaus County

Groundwater Basin

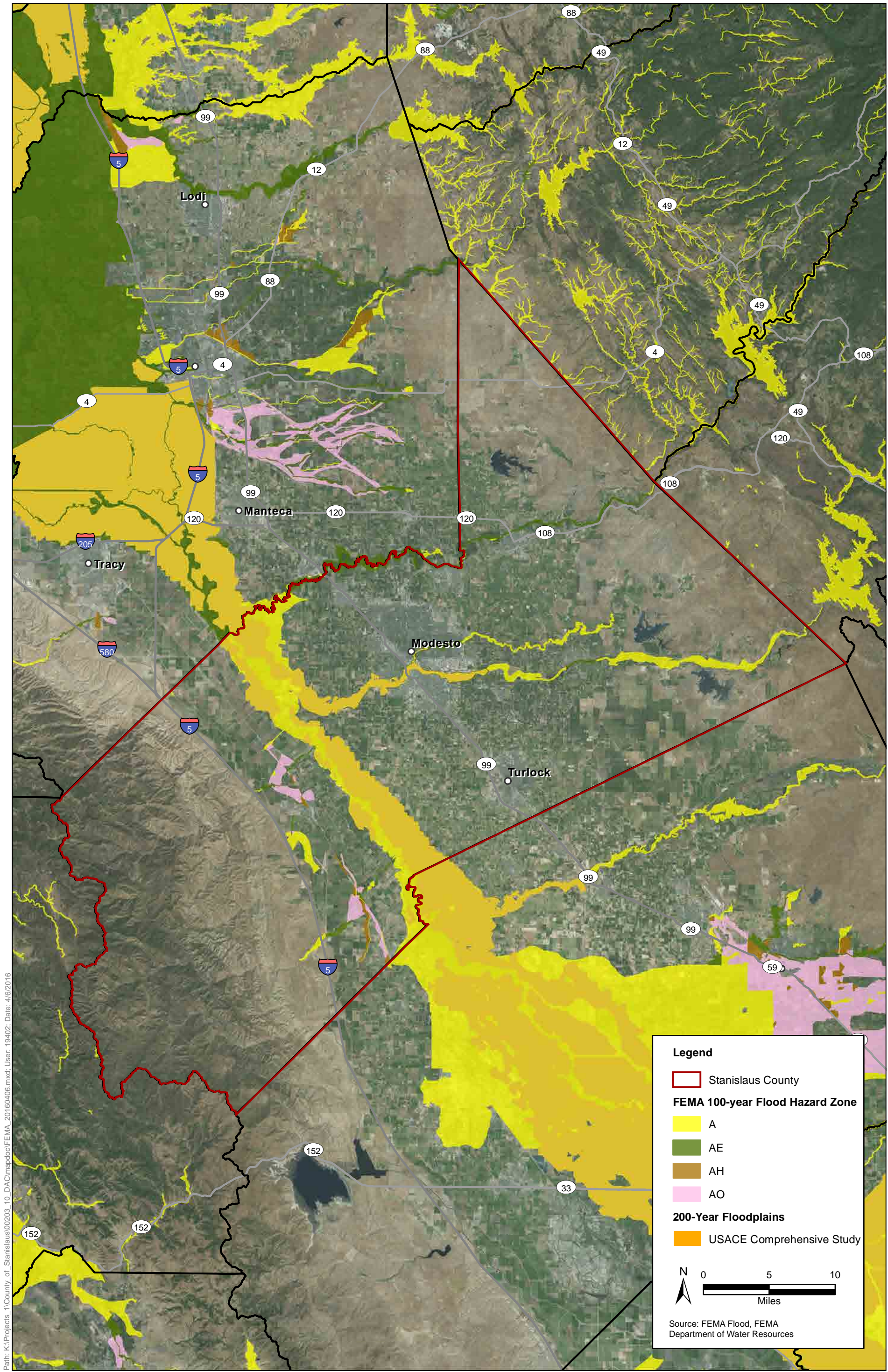
- DELTA-MENDOTA CANAL
- GOPHER RIDGE
- MIDDLE WEST SIDE
- NORTH VALLEY FLOOR
- PAJARO RIVER
- SAN JOAQUIN DELTA
- SAN JOAQUIN VALLEY FLOOR
- SANTA CLARA
- SOUTH BAY
- STANISLAUS RIVER
- TUOLUMNE RIVER

N
 0 5 10
 Miles

Source: Watershed, California Interagency Watershed Map 2004.



Figure 3.9-2
Groundwater Basins within the Project Area



Path: K:\Projects_1\County_of_Stanislaus\00203_10_DAC\mapdoc\FEMA_20160406.mxd; User: 19402; Date: 4/6/2016

Legend

- Stanislaus County
- FEMA 100-year Flood Hazard Zone**
- A
- AE
- AH
- AO
- 200-Year Floodplains**
- USACE Comprehensive Study

N
 0 5 10
 Miles

Source: FEMA Flood, FEMA Department of Water Resources



Figure 3.9-3
FEMA Flood Zones within the Project Area

3.10 Land Use and Planning

3.10.1 Introduction

This section discusses the impacts of the plan updates with respect to land use and planning. It lists the thresholds of significance that form the basis of the environmental analysis, describes the land use and planning study area and major sources used in the analysis, provides environmental setting information that is relevant to land use and planning, and assesses whether the plan updates would result in significant impacts with respect to land use and planning.

Study Area

The land use and planning study area for the EIR is defined as Stanislaus County.

3.10.2 Environmental Setting

This section describes the state, regional, and local regulations and policies that are applicable to the plan updates and the existing conditions pertaining to land use and planning in the study area. The existing conditions will constitute the baseline for this analysis.

Regulatory Setting

The following describes state, regional, and local regulations that apply to the project. There are currently no federal regulations that pertain to land use.

State

Planning and Zoning Law

Government Code Section 65300 requires Stanislaus County and all other cities and counties in the state to “adopt a comprehensive, long-term general plan for the physical development of the county.” The general plan is considered to be the county’s “constitution,” in that it contains development and conservation policies that address land use, housing, circulation, open space, conservation, noise, and public safety issues as well as other issues that face the county.

Senate Bill (SB) 375, the Sustainable Communities and Climate Protection Act of 2008, was passed to support the state’s climate action goals related to reducing greenhouse gas (GHG) emissions. Under the act, the California Air Resources Board (ARB) sets regional emission reduction targets. Furthermore, each of California’s Metropolitan Planning Organizations (MPOs) must prepare a Sustainable Communities Strategy (SCS) as an integral part of its Regional Transportation Plan (RTP) (California Environmental Protection Agency 2014). The Stanislaus Council of Governments (StanCOG) adopted its RTP/SCS Plan in June 2014 (discussed in detail under “Regional,” below).

SB 375 requires consistency between regional transportation planning processes and housing planning processes. Each region’s SCS must be consistent with the Regional Housing Needs Allocation (RHNA), a process established under the State Housing Element law that requires cities in California to plan for the future development of new housing units to meet their share of their regional housing needs. The State of California requires the Department of Housing and Community

Development (HCD) to use population projection and household growth projections to identify housing needs. Each Council of Government (COG) must distribute the RHNA to each jurisdiction within the COG's region (Stanislaus Council of Governments 2014a). StanCOG's RNHA allocation is discussed below and in Section 3.13, *Population and Housing*.

Regional

StanCOG RTP/SCS

StanCOG, which is responsible for preparing the region's RTP/SCS, adopted the RTP/SCS in June 2014. The RTP/SCS strengthens the link between land use and transportation planning and contains a strategy to accommodate significant expected growth in the region (Stanislaus Council of Governments 2014b).

The RTP/SCS Plan addresses various requirements, including those of SB 375, and federal mandates under MAP-21. As noted above, SB 375 calls for reductions in GHG emissions from the transportation sector. MAP-21 emphasizes a performance-based planning approach. The RTP/SCS matches transportation investment priorities with the desired land use. The RTP/SCS itself does not control land use within the county or exert power over county land use decisions. Rather, the RTP/SCS is a steering document for StanCOG's vision for a cohesive, sustainable region with multimodal transportation options available for all users (Stanislaus Council of Governments 2014b).

Regional Housing Needs Allocation

As noted above, the RHNA is a process established under the State Housing Element law. It requires cities in California to plan for the development of housing units to accommodate population growth and meet their share of their region's housing needs. HCD is responsible for determining housing needs in a region and coordinating with the COGs, which allocate shares of housing development to cities within their jurisdictions.

Table 3.10-1. StanCOG Regional Housing Need Allocation for 2014–2023

Income Level	Unincorporated Stanislaus County Need	Stanislaus County Need
Very Low	538	5,225
Low	345	3,350
Moderate	391	3,670
Subtotal of Affordable Units	1,274	12,245
Above Moderate	967	9,085
Total	2,241	21,330

Sources: Stanislaus Council of Governments 2014c; Draft Regional Housing Needs Plan for Stanislaus County: 2014–2023. Adopted January 2014.

StanCOG is responsible for determining the share of regional housing needs to be met by each city in Stanislaus County. Four housing affordability categories have been established, which are based on Department of Finance (DOF) population projections and regional population forecasts. As shown above in Table 3.10-1, Stanislaus County's final RHNA determination is 21,330 housing units for the planning period of January 1, 2014, to September 30, 2023. Unincorporated Stanislaus County's share is 2,241 housing units (Stanislaus Council of Governments 2014a).

Local

Stanislaus County General Plan

The Stanislaus County General Plan is composed of mandatory elements and one optional element, the Agricultural Element. The county has combined the required Open Space and Conservation Elements because of their interrelated content. The last broad-based update to the general plan was adopted in 1994 (Stanislaus County 1994).

The Stanislaus County General Plan applies to unincorporated areas of the county. It does not apply to the incorporated cities, which have their own general plans, nor to state, tribal, or federal lands. The general plan outlines the county's land use goals, policies, and implementation measures. Overarching goals include providing for diverse land use needs, ensuring compatibility between land uses, fostering stable economic growth through appropriate land use policies, ensuring that an effective level of public service is provided in unincorporated areas, complementing the general plans of cities within the county, and providing direct citizen participation in land use decisions involving the expansion of residential uses into agriculture and open space areas. Figure 3.10-1 illustrates the pattern of future land uses established by the General Plan.

Airport Land Use Compatibility Plan

The California State Aeronautics Act (California Public Utilities Code Sections 21670–21679.5) requires, with limited exceptions, the creation of an Airport Land Use Commission in each county that has a public-use or military airport. The commission is required to prepare an Airport Land Use Compatibility Plan (ALUCP) for each public-use and military airport. An ALUCP must reflect anticipated growth at an airport for at least 20 years based on a long-range master plan or airport layout plan. Each ALUCP includes policies to prevent conflicts between planned airport development and proposed land uses within the Airport Influence Area (AIA) identified in the compatibility plan.

The Stanislaus County ALUC is responsible for the preparation of ALUCPs for public-use airports in Stanislaus County. The proposed ALUCP would replace the current Airport Land Use Commission Plan that was originally adopted on August 3, 1978, and amended on May 20, 2004. Since 2004 the number of public-use airports in the County has changed, the long-range plans associated with the remaining airports have been revised, and the *Airport Land Use Planning Handbook* set forth by the Caltrans Division of Aeronautics, which is used to prepare ALUCPs, has been revised. The County prepared the proposed 2015 ALUCP to address these changes in facilities, planning and guidance.

The purpose of the ALUCP is to promote compatibility between each public-use airport and the land uses in its vicinity to the extent that these areas have not already been devoted to incompatible uses. To accomplish this, the ALUCP establishes a set of compatibility criteria that the ALUC will use to evaluate the compatibility of land use proposals within an Airport Influence Area as well as the Airport's long-range development plans (see Figures 3.10-2 and 3.10-3). The County of Stanislaus and jurisdictions with land use authority over areas within the AIA are expected to incorporate certain criteria and procedural policies from the proposed ALUCP into their general plan and zoning ordinances in an effort to ensure that future land use development will be compatible with long-term airport operations. Each agency or jurisdiction also has the option of overruling the ALUC in accordance with the steps defined by state law and summarized in the ALUCP.

Stanislaus County Zoning Ordinance

The Stanislaus County Zoning Ordinance regulates land use. The county has several designated zoning districts (e.g., agriculture, residential, planned development, industrial, historic site, highway frontage, commercial, and specific plan). In addition, the county also has a Salida Community Plan district. California planning and development law requires zoning in all counties and general law cities to be consistent with their adopted general plans (Governor's Office of Planning and Research 2001).

Stanislaus County Subdivision Ordinance

The Stanislaus County Subdivision Ordinance establishes the procedure by which private land may be divided for sale. Additionally, the ordinance regulates subdivision of property in accordance with California's Subdivision Map Act. Stanislaus County is responsible for regulation and control of subdivision design and improvement, including proper grading and erosion control.

Stanislaus County Measure E

Stanislaus County voters passed Measure E in November 2007. Under Measure E, land that is designated as agricultural or open space in the Land Use Element cannot be amended to residential or rezoned to residential without the approval of a majority of county voters. Because Measure E amended the county general plan, it affects unincorporated lands that are under the county's jurisdiction. Under California law, a general plan amendment that is adopted by voter-approved initiative can be changed only by approval of another initiative.

Measure E is intended to direct residential growth into the incorporated cities, which are more capable of serving such growth, and limit the potential for residential growth to convert agricultural land within the unincorporated areas. Its immediate effect is to restrict future residential developments within the unincorporated county to those areas that are currently designated and zoned for residential development (e.g., Salida and Diablo Grande). Measure E will remain in effect until December 31, 2036, unless it is otherwise amended by a future initiative (Stanislaus County 2007).

City of Hughson General Plan

The City of Hughson's General Plan was adopted on December 12, 2005. It is effectively consistent with the County General Plan with the following exception. Action LU-2.1 references using Hughson's redevelopment agency to create an industrial recruitment plan (City of Hughson 2005).

Action LU-2.1: Create an industrial recruitment plan. As part of the plan development, target and survey industries to determine inducements required. The Redevelopment Agency and local business groups should be involved in development and implementation of the plan.

City of Riverbank General Plan

The City of Riverbank's General Plan was adopted in 2005. It is effectively consistent with the County General Plan, with the exception of Policy LAND-5.2 addressing infill development.

LAND 5.2: Infill development will be given priority to remaining capacity for water supply and delivery, wastewater treatment and conveyance, stormwater collection and conveyance, and other services and infrastructure currently in place. Development impact fees shall reflect the existing capacity to serve infill development areas. Any urban development of new growth areas shall plan

and finance necessary infrastructure and service expansion to serve those areas (City of Riverbank 2005).

Table 3.10-2. Pertinent General Plan Policies for Jurisdictions within Airport Influence Areas

<p>County of Stanislaus General Plan <i>Policies that would be affected by the proposed 2015 ALUCP are associated with the following General Plan Elements: Land Use Circulation, Safety, and Noise.</i></p>
<p>LAND USE ELEMENT <i>Policy nos. 4 and 5 of the Stanislaus County Land Use Element and some of its subsequent implementation measures address public use airports.</i></p> <p>POLICY FOUR: Urban development shall be discouraged in areas with growth-limiting factors such as high water table or poor soil percolation, and prohibited in geological fault and hazard areas, flood plains, riparian areas, and airport hazard areas unless measures to mitigate the problems are included as part of the application.</p> <p>Implementation Measures</p> <p>2. Applications for development in areas with growth-limiting factors such as high water table, poor soil percolation, geological fault areas, flood plains, and airport hazard areas shall include measures to mitigate the problems.</p> <p>Responsible Departments: Public Works, Environmental Resources, Planning Department, Planning Commission, Board of Supervisors</p> <p>4. The County will continue to enforce the height limiting ordinance near airports.</p> <p>Responsible Departments: Planning Department, Board of Supervisors</p> <p>POLICY FIVE. Residential densities as defined in the General Plan shall be the maximum based upon environmental constraints, the availability of public services, and acceptable service levels. The densities reflected may not always be achievable and shall not be approved unless there is proper site planning and provision of suitable open space and recreational areas consistent with the supportive goals and policies of the General Plan.</p> <p>Implementation Measure</p> <p>1. Residential development shall not be approved at the maximum density if: (1) it threatens riparian habitat; (2) growth-limiting factors such as high water table, poor soil percolation, geological fault areas, and airport hazard areas exist; (3) development is in a designated floodway or does not meet the requirements of Chapter 16.40 of the County Code; (4) it does not comply with airport height limiting ordinance restrictions; (5) there is lack of, or inadequate, sanitary sewer or public water service; or (6) environmental impacts, including traffic, cannot be mitigated.</p> <p>Responsible Departments: Planning Department, Environmental Resources, Public Works, Planning Commission, Board of Supervisors</p>
<p>CIRCULATION ELEMENT <i>The Circulation Element recognizes the role of aviation in transporting people and goods. Policy No. 10 and its implementation measure specifically address the ALUCP.</i></p> <p>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.</p>
<p>SAFETY ELEMENT <i>The Safety Element identifies airports under the category of "Other Hazards," and states that "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." Goal Two, Policy Twelve, and its implementing measures specifically address aviation, airports, and the ALUCP.</i></p> <p>GOAL TWO Minimize the effects of hazardous conditions that might cause loss of life and property.</p>

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 Plan shall be updated to conform to current state law when funds are budgeted for the project.
Responsible Departments: Planning Department, 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 Department, Airport Land Use Commission, Board of Supervisors
4. The height and exterior materials of new structures 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 Department, Board of Supervisors

NOISE ELEMENT**1.1 AUTHORITY****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.

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 Measure

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 Ldn (or CNEL) or less in outdoor activity areas of single family residences. 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 65 Ldn (or CNEL) or less in community outdoor space for multi-family residences, and 45 Ldn (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 Ldn (or CNEL) will be allowed. Under no circumstances will interior noise levels be allowed to exceed 45 Ldn (or CNEL) with the windows and doors closed in residential uses.

City of Ceres General Plan

The Land Use And Community Design Element and Health and Safety Elements refer to 2004 ALUCP policies; the General Plan policies are identical to ALUCP policies.

CHAPTER 1, LAND USE AND COMMUNITY DESIGN

Chapter 1 of the City of Ceres General Plan, includes a discussion of Airport Development Area.

GOAL I.H:

To regulate future development near the airport to provide for protection of public health and safety.

POLICIES

I.H.1. The City shall emphasize compatibility of land uses for both urban development and for airport facilities to ensure the availability of local air transportation services and a quality living environment.

I.H.2. The City shall allow new development within Airport Safety Zones (Figure 1-4) according to the standards in Table 1-2. At the discretion of the Ceres Director of Planning and Community Development, an applicant for a permit or other entitlement may be required to submit survey information sufficient to document the location of a property or development site in relation to the various Airport Safety Zones.

I.H.3. The City shall work closely with appropriate agencies, including the Stanislaus County Airport Land Use Commission, to ensure compatibility of land uses with airport facilities and operations. To this end, the City shall encourage the Stanislaus County Airport Land Use Commission to update the Airport Land Use Commission Plan consistent with the requirements of State law, including using the California Division of Aeronautic Airport Planning Handbook as a guideline.

I.H.4. The City shall limit building heights for airspace protection in accordance with Federal Aviation Regulations Part 77.

I.H.5. The City shall require the dedication of overflight easements and/ or deed notices when development is proposed on property within the airport safety zones in Figure 1-4.

IMPLEMENTATION PROGRAMS

1.10 The City shall review, and revise as necessary, the Airport Overlay Zone of the Zoning Ordinance consistent with the standards in this General Plan.

Responsibility: Planning and Community Development Department, City Council

Time Frame: FY 97 -98; 98-99

CHAPTER 7, HEALTH AND SAFETY

Chapter 7 of the City of Ceres General Plan acknowledges the potential risk associated with an air crash, and Section 7 includes policies "to encourage safe development patterns around airports and within flight zones to minimize risk.

GOAL 7.E

To minimize the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from airport hazards.

POLICIES

7.E.1. The City shall work with the City of Modesto and Stanislaus County to ensure that new development around airports does not create safety hazards such as lights from direct or reflective surfaces, smoke, electrical interference, hazardous chemicals, or fuel storage in violation of adopted safety standards.

Responsibility: Planning and Community Development Department

City Council

Time Frame: FY 97 -98; 98-99

City of Modesto Final Urban Area General Plan

The adopted General Plan refers to aviation and ALUCP policies in Chapter V, Community Services and Facilities; Chapter VII, Environmental Resources and Open Spaces; and Chapter VIII, General Plan Implementation

The City of Modesto's Final Urban Area General Plan addresses the Modesto City/County Airport and its potential effects on land use in Chapter 5, Community Services and Facilities; Chapter 7, Environmental Resources and Open Space, which addresses noise from Airport operations; and Chapter 8, General Plan Implementation.

Chapter 5, Community Services and Facilities

Chapter 5, Section F, identifies the Modesto City/County Airport as a community facility in Sections F.1 and F.2 as note below.

1. Overview

Section 65302.3 of the Government Code requires the City's General Plan to be consistent with the Airport Land Use Plan for the Modesto City–County Airport. This Airport Land Use Plan was adopted by the Airport Land Commission on August 3, 1978, in accordance with Section 21675 of the Public Utilities Code.

2. Modesto City–County Airport Policies—Baseline Developed Area

Since the Airport is located in the Baseline Developed Area, the following policies apply to the Airport and the area surrounding it:

- a. The City encourages aviation services at the Modesto City–County Airport and promotes airline service that meets the present and future needs of the community. The City should pursue greater inter-regional air service to the extent that it is economically viable.
- b. Land use around the Modesto City–County Airport will be consistent with the Stanislaus County's Airport Land Use Commission (ALUC) plan adopted in accordance with Section 21676 of the Public Utilities Code. The ALUC plan provides for the orderly growth of the Airport and the area surrounding the Airport within the jurisdiction of the Airport Land Use Commission, and will safeguard the general welfare of the inhabitants within the boundary of influence and the public in general.
- c. Mitigation measures suggested by the Airport Master Plan and related documents should be considered at the implementation of inter-regional air service, including a voluntary noise reduction program for residential units impacted by noise levels that exceed acceptable state standards.
- d. In accordance with Senate Bill 1462 (2004), the City of Modesto shall provide a complete copy of an application for projects located within 1,000 feet of a military installation, low-level flight path, or special use airspace to any branch of the United States Armed Forces. The City of Modesto does not currently have, and is not currently within 1,000 feet of, any military flight paths or military activity. At this time, there is currently no effect on the City of Modesto.

Chapter VII, Environmental Resources and Open Spaces

Section G, Noise, identifies the community's noise goals and policies to reduce noise pollution. Figure VII-2 shows projected traffic noise levels resulting from General Plan growth generated by the traffic, airport and the railroad based aircraft operations identified in the 2002 *Draft Airport Master Plan Paragraph 3 and subparagraph F address aircraft noise contours*

Paragraphs 3d and 3i state the following requirement for new development in baseline or redevelopment areas:

- d. The City of Modesto shall use the most recent noise contour map to implement the requirements of Noise Insulation Standards contained in Title 24 of the California Code of Regulations. (Title 24 applies to multi-family housing, not single-family.) Title 24 also specifies minimum values for the sound insulation afforded by interior partitions separating different dwelling units from each other and from interior common space.
- i. Airport and aircraft noise analysis will be conducted in accordance with the Modesto City–County Airport's Master Plan mitigation measure in the approved plan and Federal Aviation Regulation (FAR) Part 150. Mitigation will be required for new construction as necessary to meet the noise compatibility standards of the [*Urban Area General Plan*] UAGP. As airport operations increase, mitigation will be provided to existing residential and other sensitive uses, either through operations or direct property improvements, in order to meet Title 14 Code of Federal Regulations Part 150 land use compatibility guidelines.

Chapter VIII, General Plan Implementation

Chapter VII identifies tools that are available to the City of Modesto (City) to help build the city envisioned by the General Plan. Paragraph N identifies the ALUCP as an administrative tool to that will facilitate public and private development activities:

N. STANISLAUS COUNTY AIRPORT LAND USE PLAN

Section 21675(a) of the Public Utilities Code allows for the creation of comprehensive land use plans" that will provide for the orderly growth of each public airport and the area surrounding each public airport within the jurisdiction of the commission..." In formulating a Land Use Plan, the Airport Land Use Commission may develop height restrictions on buildings, specify use of land, and determine building standards, including soundproofing adjacent to airports, within the planning area.

<p>1. Implementation Device Governing the Submittal and Adoption of the Stanislaus County Airport Land Use Plan</p> <p>The Stanislaus County Airport Land Use Plan was adopted in 1978 in accordance with Section 21670 of the Public Utilities Code; it may be amended from time to time, as allowed by that Code.</p>
<p>City of Oakdale General Plan</p> <p>Elements of the City's General Plan that address aviation and ALUCP policies include: Land Use, Economic Viability, Mobility Noise, and General Plan Administration.</p>
<p>LAND USE</p> <p>GOAL LU-6</p> <p>A mix of governmental, educational, recreational and open space facilities that conveniently support the needs of Oakdale's residents and businesses.</p> <p>POLICIES</p> <p>LU-6.5 Airport Secondary Uses. Accommodate uses that support or benefit from Oakdale Municipal Airport operations within and adjacent to the airport property when determined consistent with the City of Oakdale Municipal Airport Master Plan. (RDR, MP)</p> <p>LU-6.6 Airport Operations. Protect Oakdale Municipal Airport from encroachment by ensuring that all new land uses and developments are compatible with airport operations, the adopted Oakdale Municipal Airport Master Plan and the adopted Airport Land Use Commission Plan. (RDR, MP, M-IP8)</p>
<p>ECONOMIC VIABILITY</p> <p>BUSINESS RETENTION POLICIES</p> <p>EV-3.9 Industrial Business Recruitment. Identify and pro-actively recruit a diverse range of new industrial and manufacturing uses capitalizing on the City's proximity to productive agriculture, convenient railroad access, the nearby municipal airport, and future connectivity to the North County Corridor. (EVIP2)</p> <p>EV-3.11 Oakdale Municipal Airport. Identify and pro-actively recruit commercial, office, industrial, and ancillary service uses that benefit from proximity to the Oakdale Municipal Airport. (MP, EV-IP2)</p>
<p>MOBILITY</p> <p>M-6: AVIATION</p> <p>GOAL</p> <p>M-6. Expanded use of the Oakdale Municipal Airport within the parameters of compatible surrounding uses.</p> <p>POLICIES</p> <p>M-6.1 Aviation Services. Encourage a full range of aviation services at the Oakdale Municipal Airport that meets the present and future needs of residents, businesses and the local aviation community. (MP, M-IP2)</p> <p>M-6.2 Municipal Airport Master Plan. Update and implement the City of Oakdale Municipal Airport Master Plan to ensure that facilities keep pace with increased demand for aviation services. (MP)</p> <p>M-6.3 Consistency with ALUC Policies. Require that all development is consistent with the policies adopted by the Stanislaus County Airport Land Use Commission. (RDR, M-IP8)</p>
<p>NOISE</p> <p>The Noise Element of the General Plan specifically addresses airport noise, stating:</p> <p>The Oakdale Municipal Airport is an "island" extension of the City limits, located over 1 mile to the southeast of the City. Future development under the 2030 General Plan will be consistent with the Airport Land Use Commission Plan (ALUCP) as was being updated by the County at the time of General Plan approval. Based upon information generated for the ALUCP update, no conflicts between airport operations and the City's noise regulations were identified. Existing and future airport noise contours are shown in Figure N-1. It is anticipated that future airport operations will be similar to existing operations and minimal changes in noise contours would occur.</p> <p>POLICIES</p> <p>N-1.10 Airport Plans. Regulate development within the 65 dBA CNEL airport noise contour in accordance with plans adopted by the Airport Land Use Commission and the City. (RDR, IGC)</p>

General Plan Administration

The General Plan Administration chapter of the General Plan acknowledges the role of other agencies in implementing its General Plan policies stating:

Public agencies that the City of Oakdale will commonly need to coordinate with to implement General Plan policies include, but are not limited to:

- Local agencies such as Stanislaus County; City of Riverbank; City of Modesto; special districts; and school districts
- Regional agencies such as Stanislaus County Local Agency Formation Commission (LAFCO); San Joaquin Valley Air Pollution Control District; Regional Water Quality Control Board; Stanislaus Council of Governments (StanCOG); and Stanislaus County Airport Land Use Commission
- State agencies such as Caltrans and Native American Heritage Commission (NAHC)
- Federal agencies such as U.S. Fish and Wildlife Services (USFWS); U.S. Army Corps of Engineers; and Federal Emergency Management Agency (FEMA)

IMPLEMENTATION PROGRAMS – Economic Vitality**ECONOMIC VITALITY**

Participate with Stanislaus County in the update to the Airport Land Use Commission Plan.

Implements Policy(ies): LU-6.6 and M-6.3

Responsible Department: Public Works

Sources:

City of Modesto Final Urban Area General Plan. 2008. Department of Community and Economic Development. Ceres, CA. Available at: <http://www.modestogov.com/ced/pdf/planning/documents/general-plan/technical/urban%20area%20general%20plan.pdf>

City of Ceres General Plan. 1997. Community Development and Housing Division. Ceres, CA. Available at: <http://www.ci.ceres.ca.us/GeneralPlan.pdf>

Stanislaus County General Plan. 1987. Stanislaus County Department of Planning and Community Development. Modesto, CA. Available at: <http://www.stancounty.com/planning/pl/general-plan.shtm>

Existing Conditions

Stanislaus County is located in the San Joaquin Valley, in the heart of California's Central Valley. The county is bordered by the Coast Ranges to the west and the Sierra Nevada to the east. It spans nearly 1,500 square miles and has approximately 514,000 residents (U.S. Census Bureau 2010) in its nine cities and unincorporated communities. Two of California's major north/south routes, Interstate 5 and State Route 99, traverse the county, connecting it to employment centers in the San Francisco Bay Area, Stockton, and Sacramento. The county is also home to several lakes and rivers, including the Stanislaus River, Tuolumne River, San Joaquin River, Turlock Lake State Recreation Area, and Modesto Reservoir.

In part because of its proximity to the Bay Area and relative lower cost of living, Stanislaus County is an agricultural county in transition. Prior to 1960, most of the county's population lived on farms; today, the population of the nine incorporated cities is nearly three times that of the unincorporated area of the county. Much of this change is the result of population and economic growth in the Bay Area that has created employment opportunities within commuting distance of the county's largest cities, along with housing prices that are substantially higher than those in Stanislaus County. Unprecedented population growth throughout the 1990s increased pressure to convert productive agricultural lands to non-agricultural uses. As a response to this rapid growth, voters passed the 30-Year Land Use Restriction Initiative (Measure E) in 2008, which requires any redesignation or

rezoning of land in the unincorporated area from agricultural or open space use to a residential use to be approved by a majority vote of county voters at a general or special local election.

3.10.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan updates; discusses the individual impacts relative to the thresholds of significance; discusses mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and indicates the overall significance of the impact with mitigation incorporated.

The following sections describe the changes to the Land Use Element and the ALUCP that are proposed in this draft EIR.

Stanislaus County General Plan Land Use Element

Stanislaus County proposes to update several elements of the general plan. The update includes changes to the text of the land use designations but does not propose any changes to the land use map or the existing boundaries of the land use designations. The update of the general plan incorporates changes that have occurred in terms of legislation, regulatory codes, and local standards. The update also includes some minor revisions to general plan language and some policy improvements. The general plan's 20-year planning horizon will be extended to 2035 by this update. The update integrates the population projections adopted by StanCOG's 2014 RTP/SCS into the general plan.

A number of changes in the Land Use Element that center on unincorporated communities have been proposed, including:

- Updating the language within the Land Use Element to reflect the statutory elimination of redevelopment agencies. The general plan will still utilize the word "redevelopment." However, it will be used in the context of renovations or updates occurring within existing development, not to redevelopment agency activity (Goal One, Policy Six, Implementation Measures 1 and 2).
- Eliminating the reference to the Urban Services zoning district in the implementation measure regarding rezoning within the sphere of influence of a community services district, sanitary district, or domestic water district. The implementation measure would instead state that land within the sphere of influence of a community services district, sanitary district, or domestic water district shall be rezoned for development only if capacity for connecting to available public services exists and any resulting projects are conditioned to require connection to available services (Goal One, Policy Six, Implementation Measure 3).
- Adding policy language that requires, when feasible, new development to 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 (Goal One, Policy Six, Implementation Measure 4).
- Adding language to Goal One, Policy Six, Implementation Measure 5, to encourage unincorporated communities to establish "self-help" programs (such as benefit assessment districts).
- Including in Goal One, Policy Six an assessment of the infrastructure needs of "disadvantaged communities" (new Implementation Measure 6).

- Clarifying that all requests for development that require discretionary approval and include lands adjacent to or within riparian habitat shall include measures for protecting that habitat to the extent that such protection does not pose threats to proposed site uses, such as airports (Goal One, Policy Seven, Implementation Measure 1).
- Adding measures to support economic development and job creation within the county (Goal Three, Policy Eighteen, Implementation Measures 1–3).
- Encouraging reuse of the Crows Landing air facility as a regional jobs center (Goal Three Policy Eighteen, Implementation Measure 9).
- Adding Policy Sixteen and Implementation Measures 1 and 2, under Goal TWO to reduce impacts associated with artificial lighting.
- Adding a new policy supporting efforts to direct economic development and job creation centers towards incorporated areas, the County shall also consider approval of centers in unincorporated areas of unique character and proximity to transportation infrastructure. (Goal Three, Policy Twenty-Two, Implementation Measure 1. Due to the addition of this new policy, the remaining policy numbers have changed).
- Adding an implementation measure such that development within a public water district and/or wastewater district shall connect to the public water system and/or the wastewater treatment facility, except where capacity is limited or connection to existing infrastructure is limiting and an alternative is approved by the county's Department of Environmental Resources. Development outside a water and/or wastewater district shall meet the standards of the Stanislaus County Primary and Secondary Sewage Treatment Initiative (Measure X) and domestic water (Goal Four, Policy Twenty-Four, Implementation Measure 2).
- Amending Goal Four, Policy Twenty-Four, Implementation Measure 6 to provide that the rezoning of property for development prior to 1) annexation to a special district or 2) inclusion of such property into a newly formed special district that will provide urban services (i.e., sanitary sewer district, domestic water district, or community service district) shall be approved only if the development is adequately conditioned to restrict it from occurring until annexation to or the formation of the required district is complete.
- Adding an implementation measure to allow the County to amend its ordinances to implement any specific designation created by agreement with a City within a sphere of influence, allowing all active agreements to be incorporated into the General Plan as an Appendix to the Land Use Element, and upon approval incorporated into the General Plan without the need for a General Plan amendment (Goal Five, Policy Twenty-Six, Implementation Measure 6).
- Enhancing policies about complementing the general plans of cities within the county. Coordination with cities is encouraged to identify opportunities for developing uniform development standards in city spheres of influence and along all major county-defined gateways to cities. An implementation measure has been added that will require development projects that require discretionary approval located outside the sphere of influence of cities but within one mile of a city's adopted sphere of influence boundary and a city's adopted general plan area to be referred to that city for consideration. However, the county reserves the right of final discretionary action and authority (Goal Five, Policy Twenty-Seven, Implementation Measures 1–3).

- Adding a policy that expresses the county’s support for a county-wide growth management strategy that is equitable to the needs of the county and all nine cities, taking into consideration land consumption and absorption rates (Goal Five, Policy Twenty-Eight, Implementation Measures 1 and 2).
- Adding a new goal and related policies regarding healthy living environments for county residents. Recent environmental legislative changes led to the creation of a new goal to promote and protect healthy living environments and encourage development that result in the following (Goal Six, Policies Twenty-Nine through Thirty-one).
 - Decreases air and water pollution,
 - Reduces the consumption of natural resources and energy,
 - Increases the reliability of local water supplies,
 - Facilitates alternative modes of transportation,
 - Promotes active living, and
 - Improves 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 (Goal 6, Policies 27–29).
- Revising the portion of the “Background” section of the element regarding Spheres of Influence.
- Amending the “commercial” general plan designation to allow residential development in limited situations or when connected to both public sewer and water service.
- Amending the general policy statement regarding “community plans” to specify that any requests for rezoning within a community plan area must be consistent with the proposed use category on the community plan and shall be processed as a general plan amendment.
- Adding clarifying language to the Salida Community Plan section to differentiate the “existing plan” from the “amendment area,” specify the date of adoption of the amended area, and clarify the process for making amendments to the Salida initiative and the term limit of the initiative.
- Revising information in the Public Services and Facilities section to clarify the current status of educational facilities, special education, and enrollment in the County.
- Making minor revisions to the Liquid and Solid Waste Disposal Facilities section regarding location and status of the 11 permitted solid waste facilities in the County.

Airport Land Use Compatibility Plan

The update to the general plan is taking place in conjunction with the preparation of a revised ALUCP for Modesto City/County Airport and Oakdale Municipal Airport. Each ALUCP considers a 20-year planning horizon and revised policies have been updated in coordination with the general plan update. The revisions coordinate the ALUCP with proposed general plan policies and take into account changes in land uses (apart from the general plan update) that have occurred since adoption of the current ALUCP. The updated ALUCP considers the following factors in accordance with guidance set forth by the California Department of Transportation, Division of Aeronautics, in its *California Airport Land Use Compatibility Planning Handbook* (2011):

- Noise contour safety zones,

- Airspace protection zones (FAR Part 77), and
- Overflight areas (annoyance, disclosure).

One of the greatest differences between the current ALUCP and the proposed 2015 ALUCP is associated with the number of airports being addressed. In the 2004 ALUCP, height restrictions and building standards were identified for the areas adjacent to five public-use airports: the Modesto City-County Airport, the Oakdale Municipal Airport, the Patterson Airport, Turlock Airpark, and the former Crows Landing Naval Auxiliary Landing Field. Since that time, the Patterson Airport has closed, and the Airport Operating permit issued for the Turlock Airpark is no longer valid (Haug 2013). As of 2013, the Turlock Airpark was being sold for non-aeronautical use.

The overall shape and size of the proposed Airport Influence Area (AIA) and individual compatibility zones presented in the proposed 2015 ALUCP vary from those provided in the 2004 plan. The configuration of the safety zones in the proposed 2015 ALUCP are consistent with the geometry provided in the 2011 Handbook, which considers accident distribution patterns around public-use airports. In addition, new technologies and tools, such as Geographic Information Systems (GIS) and improvements to the FAA's Integrated Noise Model (INM), provide greater precision in measuring the extent of aircraft noise exposure and locations that may be subject to increased safety hazard. For example, the FAA's current noise model considers the influence of topography on noise exposure. As a result, the areas identified as exposed to significant levels of aircraft noise has changed for both the Modesto City-County Airport and the Oakdale Airport. In both cases, the noise exposure contours shrunk as a result of more precise modeling and quieter aircraft. In addition, the proposed 2015 ALUCP also discusses the potential effect of exposure to aircraft overflight, which was not considered in the 2004 plan. The potential implications of the revised noise contours, safety zones, and airspace protection on local land use plans are described later in this EIR discussion. Potential displacement of residences as a result of the proposed ALUCP is discussed in Section 3.13, *Population and Housing*.

Ultimately, the revised county-wide ALUCP will provide policies for three airports: the Modesto City-County Airport, the Oakdale Municipal Airport, and the Crows Landing Airport. However, at this time, a new Airport Land Use Plan is being prepared separately for the Crows Landing Airport that would allow the former military airfield to operate as a public use general aviation facility. Once the County completes the Crows Landing Airport Layout Plan and its associated CEQA review, the proposed 2015 ALUCP will be amended to include new compatibility policies for the proposed Crows Landing Airport. Until that time, the currently adopted policies in the 2004 ALUCP for the Crows Landing airfield will not change and remain in effect. Therefore, the Crows Landing Airport is not considered in this CEQA analysis.

Modesto City/County Airport

The ALUCP is based on the *Airport Layout Plan and Narrative Report* that were prepared by the City of Modesto in 2009 and approved by the Federal Aviation Administration (FAA) in 2011. Based on that document, MOD will maintain its FAA classification as an Airport Reference Code (ARC) C-II airport, which indicates that the size and type of aircraft accommodated by the airport is not expected to change. Operational data in the 2009 report were reviewed to estimate operations over a 20-year timeframe. Aircraft noise data was obtained from the 2008 Noise Compatibility Study prepared by the City in accordance with Federal Aviation Regulation Part 150. The study included a baseline (2008) and two forecast levels of activity (2015 and "Long Range"). The "Long Range" forecast presented in the Part 150 study, served as the basis of the forecast operations and noise

contours used in to prepare the proposed 2015 ALUCP. Approximately 141,000 annual operations are anticipated for the 20-year planning horizon. The Caltrans Division of Aeronautics concurred with the use of the approved ALP and use of the Part 150 study long range forecast as the basis of the proposed 2015 ALUCP.

The following policy area maps, included in the updated ALUCP, were changed, based on the most recent Airport Layout Plan:

- The noise contours upon which the policies are based cover a smaller area than that of the previous ALUCP to reflect the use of newer, quieter aircraft;
- The size and configuration of safety zones have changed to reflect changes in airport operations and new guidance provided in the handbook; and
- Overflight policies are included for the first time.

Oakdale Municipal Airport

The City of Oakdale adopted a Master Plan for the Oakdale Municipal Airport in 1998 (Resolution No. 99-88). The Master Plan included a 1,300-foot runway extension and upgrade to the airport reference code. The FAA did not support the proposed runway extension, and the City prepared a revised ALP and Narrative Report in 2014 that no longer depicts a runway extension or a change in the aircraft reference code and resubmitted the plan to the FAA. The “long-term” forecast presented in the 2014 ALP and Narrative report estimates that airport will support up to 52,000 annual operations, and this long-term served as the basis of the forecast operations and noise contours used in to prepare the proposed 2015 ALUCP. The Caltrans Division of Aeronautics concurred that the aeronautical factors reflected in the 2014 ALP and Narrative Report are appropriate to serve as the basis of the ALUCP. The following policy area maps were changed, based on the date presented in the 2013 plan.

- Noise contours were defined for the first time,
- New safety zones were developed to reflect new guidance provided by the Caltrans handbook, and
- Overflight policies are included for the first time.

Major Sources Used in Analysis

Major sources used in the analysis include the Stanislaus County Zoning Ordinance, StanCOG RTP/SCS, the Stanislaus County housing element and land use designations, and the general plans of the nine incorporated cities in Stanislaus County.

Approach and Methodology

This draft EIR includes the project’s short- and long-term adverse effects on the physical and natural environment. As mentioned above, existing conditions at the time when the NOP was released represent the baseline from which land use policy updates are evaluated.

Changes to the Stanislaus County General Plan were evaluated in conjunction with the existing general plan. For cumulative impact analysis, the general plan, as proposed for amendment, was compared with the land use goals and policies of the general plans of the nine incorporated cities in the county. Each city’s land use goals and policies were compared with the proposed general plan

update to determine whether there were any conflicts between the policies of the proposed Stanislaus County General Plan and those of the nine existing general plans.

Thresholds of Significance

Based on State CEQA Guidelines, Appendix G, the plan updates would have a significant impact with respect to land use and planning if they would:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

Impacts and Mitigation Measures

Impact LAN-1: Physically divide an established community (less than significant)

The Stanislaus County General Plan update and the ALUCP update are not typical development projects in that they would not result in a direct physical change in the environment. However, the updated objectives and policies listed above will indirectly affect the environment as development occurs on the basis of those objectives and policies. Physical division of an established community may occur when general plan policies or ALUCP would substantially change the existing land use and zoning in such a way that it would cause divisions in the existing community. This typically occurs through changes to the land use map. However, the project does not propose any changes to the county's land use map or the existing boundaries of the land use designations. The update includes changes to legislation, regulatory codes, and local standards as well as some minor revisions to general plan language and some policy improvements.

The project proposes several changes to general plan language. Language in the Land Use Element would be updated to reflect the elimination of redevelopment agencies, and clarifying language would be added to differentiate the "existing plan" from the "amendment area." References to Urban Services zoning districts would be eliminated; instead, references to Urban Services zoning districts would provide that land within the sphere of influence of a community services district, sanitary district, or domestic water district would be rezoned for development only if capacity for connecting to available public services exists (Policy 6, Implementation Measure 3). New policy language would be added that would require, when feasible, new development to be designed and built to allow for the upgrading or expansion of services necessary to upgrade existing unincorporated urban communities. Language added to Policy 6, Implementation Measure 5, would encourage unincorporated communities to establish "self-help" programs (such as benefit assessment districts). Under Policy 7, Implementation Measure 1, clarifying language would be added to emphasize that all requests for development that require discretionary approval and include lands adjacent to or within riparian habitat would include measures for protecting that habitat to the extent that such protection does not pose threats to proposed site uses, such as airports. Updates to general plan land use language would not result in the division of existing communities.

Several changes to legislation, regulatory codes, and local standards would be adopted, none of which would result in the division of existing communities. A new implementation measure, consisting of an assessment of the infrastructure needs of "disadvantaged communities," would be

added under Policy 6. Additionally, several implementation measures would be added to support economic development and job creation. Implementation measures that support economic development and job creation would be added under a policy that would aim to direct economic development and job creation centers toward incorporated areas. If centers are not approved in the incorporated areas, the county would consider approving centers in unincorporated areas of unique character with proximity to transportation infrastructure. Additionally, several policies and implementation measures regarding development within public water districts and/or wastewater districts would be adopted. Several policies about complementing the general plans of cities within the county would also be included as well as a policy regarding county support for a growth management strategy that is equitable to the needs of the county and all nine cities. Similarly, the general policy statement regarding “community plans” would be amended to specify that any requests for rezoning within a community plan area must be consistent with the proposed use category on the community plan and processed as a general plan amendment. A new goal and policies regarding healthy living environments for county residents would also be added. Finally, the “commercial” general plan designation would be amended to allow residential development in limited situations or when connected to both public sewer and water service.

The proposed ALUCP update for Modesto City/County Airport and Oakdale Municipal Airport has been coordinated with the general plan update. The proposed changes to the ALUCP for Modesto City/County Airport include updating noise contours for a smaller area, updating the size and configuration of safety zones based on changes in airport operations and new guidance, and including overflight policies for the first time. Similar changes are proposed for Oakdale Municipal Airport. Changes to the ALUCP pertaining to Oakdale Municipal Airport include defining noise contours for the first time, including new safety zones to reflect Caltrans guidance, and including overflight policies. The ALUCP would establish an expanded AIA adjacent to Modesto City/County Airport that would expand its influence and therefore result in a greater potential to displace future homes than the current ALUCP does (see the discussion of potential displacement in Section 3.10, *Population and Housing*). However, the proposed changes would be unlikely to result in the division of an established community, given that the changes to the AIA would not affect existing development, only future development. All other changes would be policy changes that would not affect the built environment and therefore would have a less-than-significant impact on the division of established communities.

The general plan update does not propose new zoning or changes to the land use map or the existing boundaries of the land use designations. Additionally, the proposed ALUCP policy changes would not affect current land use patterns. Therefore, the project would have a less-than-significant impact.

Significance without Mitigation: Less than significant (no mitigation required)

Impact LAN-2: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect (less than significant)

The project was examined for conflicts with the current Stanislaus County General Plan, which the project would be updating. All of the proposed changes to goals, policies, and implementation measures would be consistent with the current general plan and therefore would not result in conflicts.

General Plan Update and City General Plans

General plan goals, policies, and implementation measures from each of the nine incorporated cities in Stanislaus County were analyzed for consistency with the proposed general plan land use changes and ALUCP changes. The proposed general plan land use changes would not conflict with the goals, policies, and implementation measures in the general plans for the City of Ceres (adopted in 1997), City of Hughson (adopted in 2005), City of Oakdale (adopted in 2013), City of Modesto (adopted in 2008), City of Newman (adopted in 2007), City of Patterson (adopted in 2010), City of Riverbank (adopted in 2005), City of Turlock (adopted in 2012), or City of Waterford (adopted in 2006).

City of Hughson

The City of Hughson's General Plan references using their redevelopment agency to create an industrial recruitment plan (City of Hughson 2005). Stanislaus County's proposed general plan update to reflect the elimination of redevelopment agencies (Policy 6, Implementation Measures 1 and 2) would be inconsistent with Action LU-2.1 in the City of Hughson's General Plan. However, this inconsistency occurs because of the State's dissolution of local redevelopment agencies. The City of Hughson's general plan has not been updated to reflect that change. The City of Hughson could still develop and implement the industrial recruitment plan, though the activities would not take place under a redevelopment agency. Therefore, this is less-than-significant. Therefore, this is a less-than-significant inconsistency.

City of Riverbank

The City of Riverbank's General Plan was adopted in 2005. The Stanislaus County General Plan update is superficially inconsistent with the City of Riverbank's Policy LAND-5.2.

Stanislaus County General Plan update to Policy 6, Implementation Measure 4, proposes new policy language that requires, when feasible, new development to 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 (Policy 6, Implementation Measure 4). Policy 6, Implementation Measure 4, of the Stanislaus County General Plan update states that new development would not be expected to be financially responsible for upgrades to infrastructure, while the City of Riverbank's policy states that development shall "plan and finance necessary infrastructure and service expansion." Although these policies are not consistent, the inconsistency represents the slightly differing policies of independent governments. No physical change would occur due to this inconsistency, and therefore this inconsistency is considered less than significant.

ALUCP Update and County and City General Plans

Modesto City-County Airport Influence Area

Stanislaus County, the City of Modesto, and the City of Ceres are the general purpose government entities having land use jurisdiction in the AIA (Referral Area 1) proposed for the Modesto-City County Airport. Referral Area 1 is the area in which noise and/or safety represent compatibility concerns, as well as potential airspace and overflight concerns. The general plans associated with these jurisdictions were reviewed to identify potential conflicts with the proposed 2015 ALUCP policies. Table 3.10-2 summarizes the applicable policies associated with each general plan.

Stanislaus County General Plan policies do not conflict with the proposed ALUCP. However, Title 17– Airport Regulations of the County Code, will require modification following adoption of the 2015 ALUCP. Goal 1 of the Noise element is to prevent the development of land uses that are incompatible near to known noise-producing industries, including airports. Noise element Goal 2 specifies the need to provide appropriate mitigation in areas exposed to noise sources including airports. Although the noise policies in the General Plan are similar to those in the proposed 2015 ALUCP, the ALUCP policies are slightly more restrictive. The proposed 2015 ALUCP would not allow any residential development within the CNEL noise contour, whereas the General Plan would allow multi-family residences within the 65 CNEL noise contour and require mitigation for outdoor and indoor areas. In the event that sufficient mitigation for outdoor uses was unavailable, the general plan would allow the housing to move forward. Since new residential development is not proposed within a 65 CNEL noise contour for on either the County’s Land Use diagram or identified in its Housing element, this difference is negligible. Safety element Policy 12 states that “The ALUCP and County Airport Regulations (Chapter 17 of the County Code) shall be “updated as necessary, maintained, and enforced.” The implementation measures state that development areas shall only be approved if they comply with the ALUCP, support revision of the ALUCP to conform to state law, and addresses the need to confer with the ALUC and either accept or overrule its recommendations. This is declaratory of state law and conforms to the 2015 ALUCP.

The City of Ceres and its sphere of influence include areas that lie within the AIA for the Modesto City-County Airport. The City’s General Plan policies emphasize the compatibility of land uses for both urban development and airport facilities, and state that new development will be allowed in accordance with the safety zones and their policy standards. The policies also emphasize the need to work closely with appropriate agencies, including the ALUC. They do not conflict with the proposed ALUCP.

The City of Modesto’s *Urban Area General Plan* was adopted in 2008. It includes policies calling for compatibility with the ALUCP for the airport. These policies are sufficiently broad that the general plan does not conflict with the proposed ALUCP.

Oakdale Municipal Airport

Stanislaus County and the City of Oakdale are the general purpose government entities having land use jurisdiction in the proposed AIA for the Oakdale Municipal Airport. Stanislaus County’s General Plan policies are summarized in the preceding Table 3.10-2. The County’s policies related to compatibility planning around airports also apply to Oakdale Municipal Airport and are not in conflict with the proposed ALUCP.

Four sections of the City of Oakdale General plan address the airport and the currently adopted ALUCP policies. None of them conflict with the proposed ALUCP.

Conclusions

Because there would be no inconsistencies with the proposed ALUCP and the inconsistencies with the Stanislaus County General Plan would be minor, policy-based inconsistencies that would not affect land use patterns in the county directly, this impact would be considered less than significant. No mitigation is required.

All three cities will need to amend or supplement their general plans and/or other implementing ordinances to specifically reflect the proposed 2015 ALUCP following its adoption. At a minimum, the agencies will be required by law to:

- Reference the 2015 ALUCP by name and adoption date;
- Establish the process the local agency will follow when forwarding certain land use actions to the ALUC for review;
- Define the process the local agency will follow when reviewing proposed land use development within the Airport Influence Area to ensure that the development will be consistent with the policies set forth in the ALUCP; and
- Incorporate the compatibility criteria, policies, and zones into the general plan or other implementing policy document referenced by the general plan.

With these mandated revisions, there will be no inconsistencies with the three cities' plans and ordinances and therefore no impact.

Significance without Mitigation: Less than significant (no mitigation required)

Impact LAN-3: Conflict with any applicable habitat conservation plan or natural community conservation plan (no impact)

The Pacific Gas and Electric Company (PG&E) San Joaquin Valley Operations and Management Habitat Conservation Plan (HCP) is located in Stanislaus County. Because this is an operations and maintenance HCP, it is applicable only to PG&E facilities. Therefore, the land use update would not conflict with the HCP (Pacific Gas and Electric Company 2007).

The PG&E San Joaquin Valley Operations and Maintenance HCP covers incidental take of special-status plants and animals due to operation of PG&E facilities, maintenance, and minor construction. The HCP covers only activities related to these specific PG&E activities and does not apply to actions undertaken by a third party, such as the county (see Section 3.4, *Biological Resources*, for additional information). Because the PG&E HCP applies only to PG&E activities, the Stanislaus County General Plan update would not conflict with an applicable HCP or natural community conservation plan. Therefore, the project would have no impact.

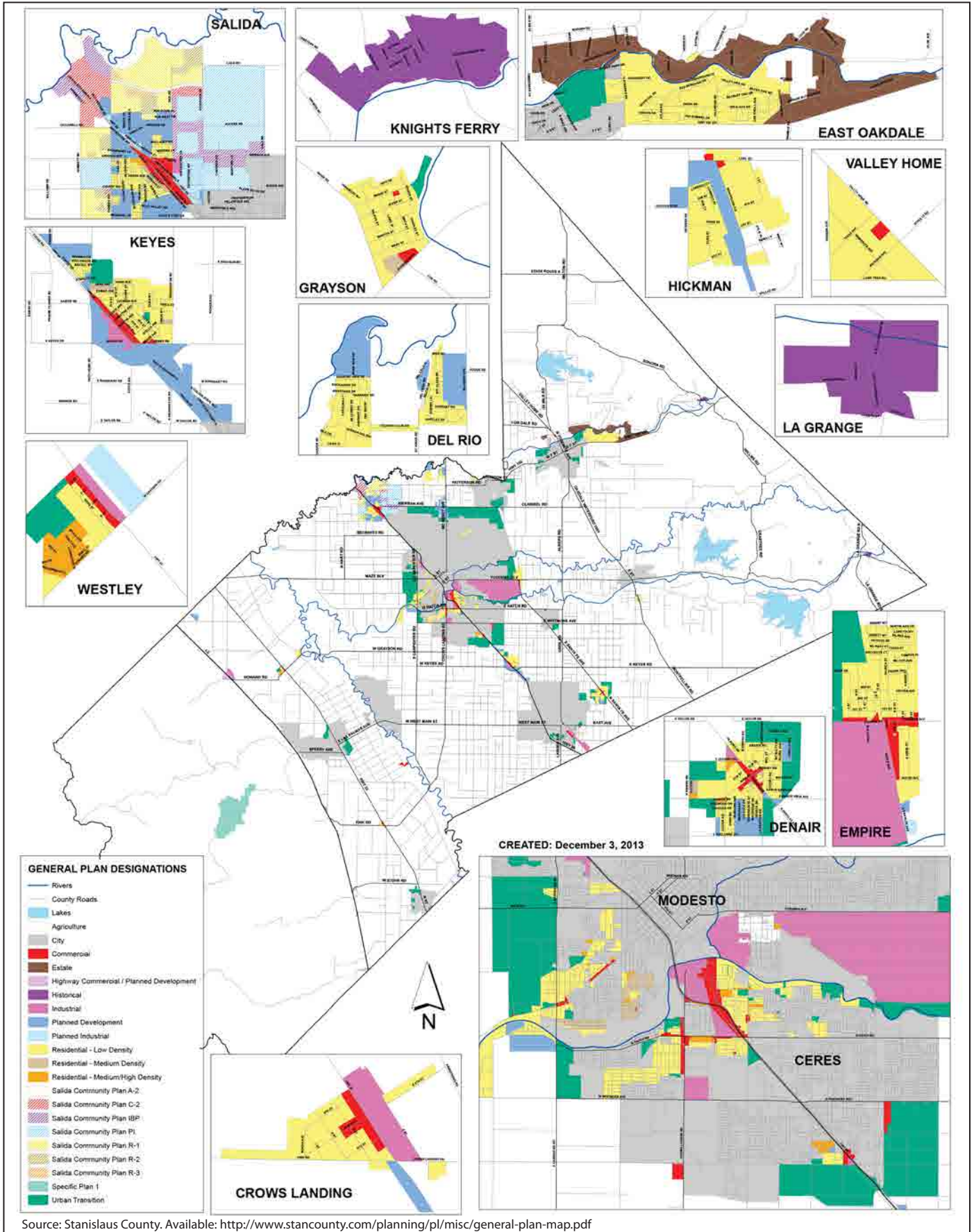
Significance without Mitigation: Less than significant (no mitigation required)

3.10.4 References Cited

Printed References

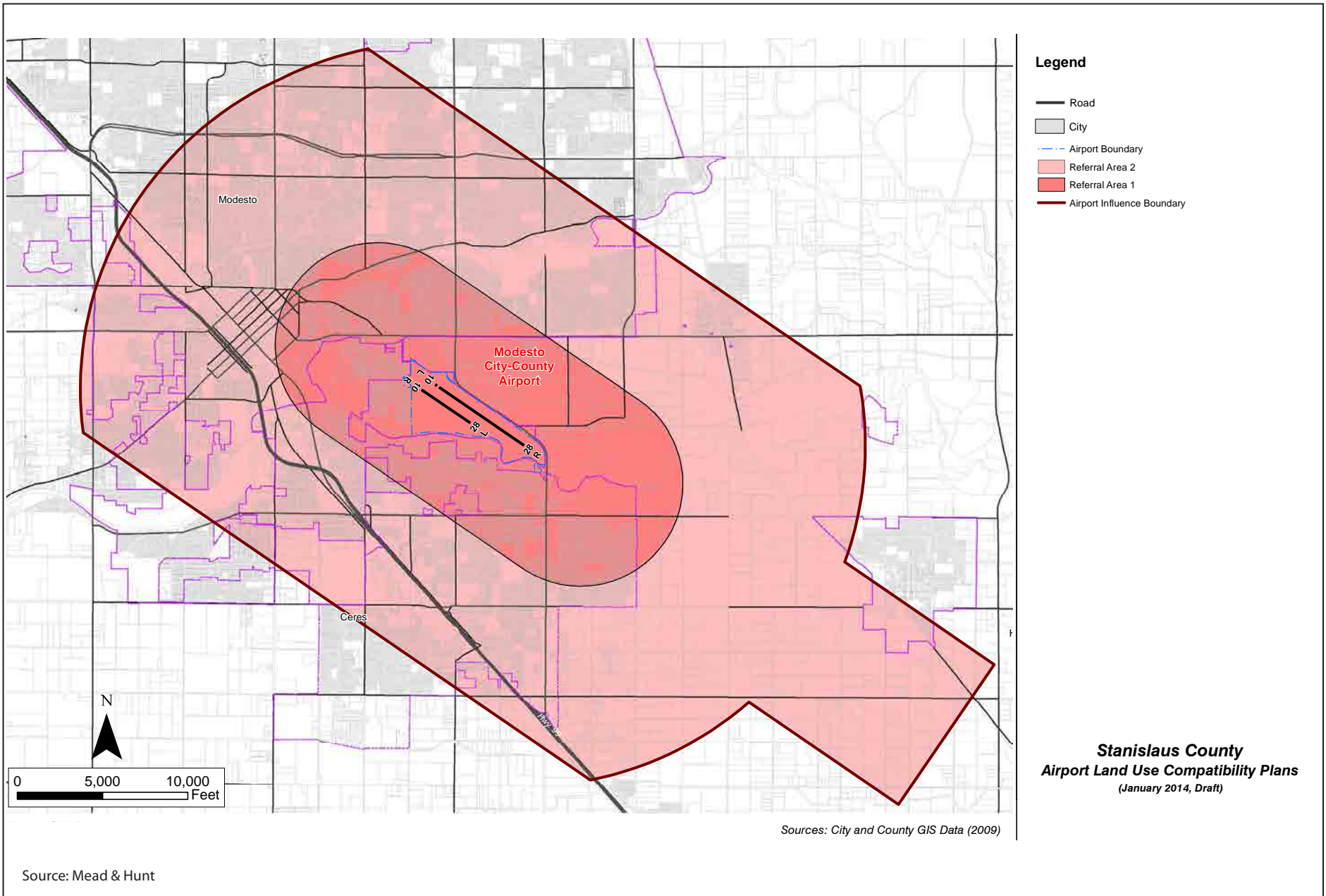
- California Environmental Protection Agency: Air Resources Board. 2014. *Sustainable Communities*. Last revised: November 19, 2014. Available: <http://www.arb.ca.gov/cc/sb375/sb375.htm>. Accessed: December 8, 2014.
- City of Hughson. 2005. *Hughson General Plan*. Prepared by Design, Community & Environment. Prepared for the City of Hughson. Available: <http://hughson.org/wp-content/uploads/2012/03/Complete-Final-GP2.pdf>. Accessed: December 16, 2014.
- City of Riverbank. 2005. *City of Riverbank General Plan*. Prepared by the City of Riverbank. Available: <http://www.riverbank.org/Depts/DevelopmentServices/GeneralPlanUpdate/default.aspx>. Accessed: December 16, 2014.

- Governor's Office of Planning and Research. 2001. *A Citizen's Guide to Planning*. Last revised: January 2001. Available: http://ceres.ca.gov/planning/planning_guide/plan_index.html#anchor189968. Accessed: December 8, 2014.
- Pacific Gas and Electric. 2007. *Final PG&E San Joaquin Valley Operation & Maintenance Habitat Conservation Plan*. Prepared for Pacific Gas and Electric Company. Prepared by Jones & Stokes. Available: http://www.fws.gov/ecos/ajax/docs/plan_documents/thcp/thcp_838.pdf. Accessed: December 18, 2014.
- Stanislaus Council of Governments. 2014a. *Regional Housing Needs Allocation (RHNA)*. Last revised: N/A. Available: <http://www.stancog.org/rhna.shtm>. Accessed: December 8, 2014.
- . 2014b. *Regional Transportation Plan/Sustainable Communities Strategy*. Stanislaus County, California. Prepared by Stanislaus Council of Governments. Available: <http://www.stancog.org/pdf/rtp/final-2014-rtpscs.pdf>. Accessed: December 8, 2014.
- . 2014c. *Draft Regional Housing Needs Plan for Stanislaus County 2014-2023*. Stanislaus County, California. Prepared by Stanislaus Council of Governments. Available: <http://www.stancog.org/rhna.shtm>. Accessed: December 8, 2014.
- Stanislaus County. 1994. *General Plan*. Stanislaus County, California. Prepared by Stanislaus County. Available: <http://www.stancounty.com/planning/pl/gp/gp-introduction.pdf>. Accessed: December 8, 2014.
- . 2007. *Full Text of Measure E: Thirty (30) Year Land Use Restriction Initiative*. Stanislaus County, California. Prepared by Stanislaus County. Available: <http://www.farmland.org/programs/states/CA/documents/measure-e-english.pdf>. Accessed: December 2, 2014.
- U.S. Census Bureau, American Fact Finder, American Community Survey (ACS). 2010. "Profile of General Population and Housing Characteristics." 2010 Demographic Profile Data, ID DP-1. Available at: factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t. Accessed: December 8, 2014.



Source: Stanislaus County. Available: <http://www.stancounty.com/planning/pl/misc/general-plan-map.pdf>

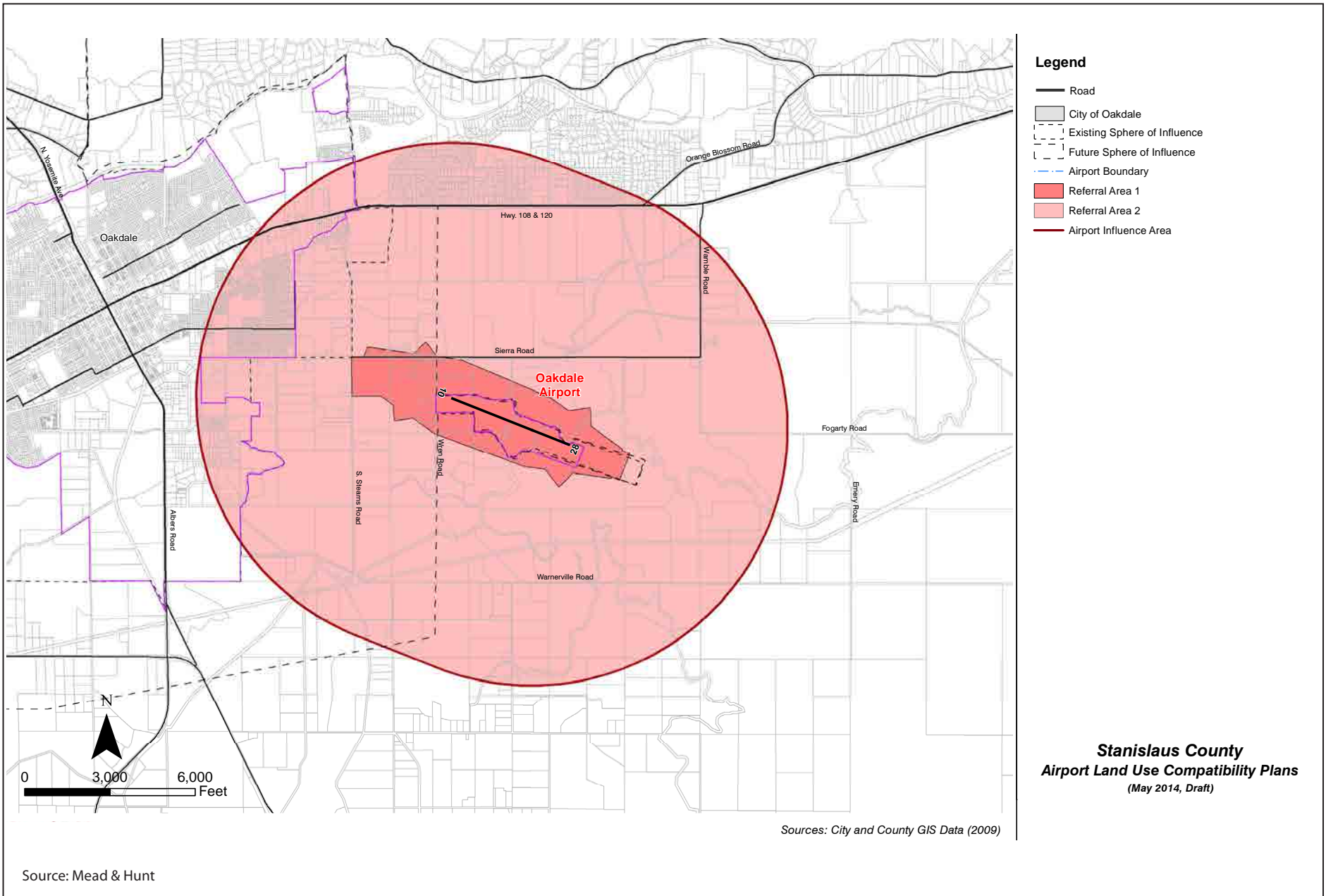
Figure 3.10-1
General Plan Designations



Graphics ... 00203.10 (04+21-2013) S5



Figure 3.10-2
Airport Influence Area Policy Map
Modesto City-County Airport



Graphics ... 00203.10 (04-21-2015) S5



Figure 3.10-3
Airport Influence Area Policy Map
Oakdale Airport

3.11 Mineral Resources

3.11.1 Introduction

This section discusses the impacts of the plan updates with respect to mineral resources. It lists the thresholds of significance that form the basis of the environmental analysis, describes the mineral resources study area and major sources used in the analysis, provides environmental setting information that is relevant to mineral resources, and assesses whether the plan updates would result significant impacts with respect to mineral resources.

Study Area

The mineral resources study area for the EIR is defined as Stanislaus County.

3.11.2 Environmental Setting

This section describes the state and local regulations and policies that are applicable to the plan updates and the existing conditions pertaining to mineral resources in the study area. The existing conditions constitute the baseline for this analysis.

Regulatory Setting

This section describes the state and local regulations related to mineral resources that would apply to the plan updates.

State

General Plan Law Conservation Element

California Government Code Section 65302 requires the conservation element of a general plan to address the “distribution of mineral resources and provisions for their continued availability.” This element is intended to maintain the availability of mineral resources necessary for construction.

California Surface Mining and Reclamation Act of 1975

The principal piece of legislation that addresses issues related to mineral resources in California is the Surface Mining and Reclamation Act of 1975 (SMARA) (Public Resources Code [PRC] Sections 2710–2719), which was enacted in response to land use conflicts between urban growth and essential mineral production. The stated purpose of SMARA is to provide a comprehensive surface mining and reclamation policy that encourages the production and conservation of mineral resources while ensuring that adverse environmental effects of mining are prevented or minimized. Under SMARA, mined lands are reclaimed and residual hazards to public health and safety are eliminated. In addition, consideration is given to recreation, watershed, wildlife, aesthetic, and other related values. SMARA governs the use and conservation of a wide variety of mineral resources, although some resources and activities are exempt from its provisions, including excavation and grading conducted for farming, construction, or recovery from flooding or other natural disasters.

SMARA provides for the evaluation of an area's mineral resources using a system of Mineral Resource Zone (MRZ) classifications that reflect the known or inferred presence and significance of a given mineral resource. The MRZ classifications are based on available geologic information, including geologic mapping and other information regarding surface exposures, drilling, and mines, and socioeconomic factors such as market conditions and urban development patterns.

The MRZ classifications are defined as follows:

- **MRZ-1**—areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence.
- **MRZ-2**—areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists.
- **MRZ-3**—areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- **MRZ-4**—areas where available information is inadequate for assignment into any other MRZ.

Although the State of California is responsible for identifying areas that contain mineral resources, the county is responsible for SMARA implementation and enforcement within unincorporated areas by providing annual mining inspection reports and coordinating with the California Geological Survey.

Mining activities in unincorporated areas that disturb more than 1 acre or 1,000 cubic yards of material require a SMARA use permit from the county. Stanislaus County is a SMARA Lead Agency and is responsible for establishing its own local regulations, such as requiring a mining applicant to obtain a surface mining permit, and submitting a reclamation plan, or providing financial assurances, pursuant to SMARA, to ensure that the adverse environmental effects of mining are prevented or minimized.

Local

Stanislaus County General Plan

Conservation/Open Space Element

GOAL NINE. Manage extractive mineral resources to ensure 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.

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.

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 to minimize undesirable impacts

Stanislaus County Code

The County Surface Mining and Reclamation Ordinance (Chapter 21.88 of the County Code) recognizes the SMARA MRZ designations and identifies requirements related to mining and mine reclamation. The code encourages mine development to occur before conflicting land uses encroach

and requires the county's general plan and resource maps to be updated within 12 months of receipt of mineral resource information from the State Mining and Geology Board.

Existing Conditions

The geologic setting of the resource study area is described in Section 3.6, Geology, Soils, and Paleontological Resources.

The focus of this section is on aggregate (i.e., sand and gravel) resources, which are the primary mineral resources of economic importance in the resource study area (Stanislaus County 1986). Aggregate resources are important because they are necessary for most construction, cannot be replaced with other products, and are most economical when used close to the area where they are mined because of the high cost of transportation (California Geological Survey 2012:1).

The predominant mineral resources in the planning area are sand and gravel (Stanislaus County 1986; California Division of Mines and Geology 1993, xv). According to the Office of Mine Reclamation (2014), 12 mines are in operation in the county. Current mining activities occur primarily within fluvial deposits along river and stream drainages (Stanislaus County 1986; California Geological Survey 2012, map).

To date, three mineral classification maps have been prepared for the county. In 1993, the California Division of Mines and Geology published the mineral land classification for the entire county. The report designated 22 areas as MRZ-2 resource zones, primarily for aggregate resources (California Division of Mines and Geology 1993). The areas along the Stanislaus and Tuolumne Rivers were considered to be of the highest grade. In 2011, in response to a petition by a mineral extraction firm, the California Geological Survey investigated the mineral resource potential of two parcels, totaling 436 acres, in the southwestern corner of the county, near Newman. Based on the results of this investigation, the California Geological Survey reclassified the two parcels as MRZ-2 resource zones (California Geological Survey 2011). In 2012 California Geological Survey Special Report 199 adopted an update of Mineral Land Classification for Portland Cement Concrete – Grade Aggregate in the Stockton-Lodi Production-Consumption Region, San Joaquin and Stanislaus Counties. The report encompassed a triangular area in the northernmost portion of the County.

The demand for aggregate resources is now much greater than the amount of permitted resources in Stanislaus County. The California Geological Survey (2012) estimated that, as of 2011, the 50-year demand for aggregate resources was 214 million tons, but the amount of permitted material totaled only 45 million tons. The county has an estimated 11 to 20 years of permitted reserves remaining (California Geological Survey 2012:7).

3.11.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan updates; the individual impacts relative to the thresholds of significance; mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and the overall significance of the impact with mitigation incorporated.

Major Sources Used in Analysis

The major source used in this analysis is listed below:

- California Department of Conservation, California Geological Survey.

Approach and Methodology

Evaluation of the mineral resources impacts in this section is based on information from published maps, reports, and other documents that describe the mineral resource conditions of the resource study area. No new fieldwork, research, or engineering-level design was conducted for preparation of this EIR. The policies of the general plan have been examined to determine whether they would result in substantial adverse changes to existing conditions.

Thresholds of Significance

Based on State CEQA Guidelines, Appendix G, the plan updates would have a significant impact with respect to mineral resources if they would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

Impacts and Mitigation Measures

Impact MIN-1: Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state (beneficial impact)

If updates made to the county's general plan were to rezone or limit areas designated for mining by the State Mining and Geology Board, this update could cause the loss of availability of a known mineral resource. This would be a significant impact. However, the updates to the general plan are designed to protect land that has been designated for mineral resource extraction by the State Mining and Geology Board.

Conservation/Open Space Element

GOAL NINE. Manage extractive mineral resources to ensure 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

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.~~
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).

These changes mean that the reclassification of the two parcels discussed in the 2011 report (see *Existing Conditions*) will be incorporated into the county's general plan, as will any future mineral resource reclassifications. This impact would be beneficial.

Significance without Mitigation: Beneficial (no mitigation required)

Impact MIN-2: Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan (beneficial impact)

If updates made to the county's general plan were to rezone or limit areas designated for mining in the county's general plan, this update could cause the loss of availability of a known mineral resource. This would be a significant impact. However, the updates to the general plan are designed to protect land that has been designated for mineral resource extraction and incorporate additional lands that have been reclassified by the State Mining and Geology Board. In Goal Nine, Policy Twenty-Six, Implementation Measure 2 (Impact MIN-1), text has been removed about approving individual projects despite significant environmental effects. In Implementation Measure 3, the measure has been changed to state that areas identified in special reports prepared by the California Geological Survey will be covered under the Mineral Resource land use designation in the Land Use Element of the general plan. These changes mean that the reclassification of the two parcels discussed in the 2011 report (see *Existing Conditions*) will be incorporated into the county's general plan, as will any future mineral resource reclassifications. This impact would be beneficial.

Significance without Mitigation: Beneficial (no mitigation required)

3.11.4 References Cited

Printed References

- California Geological Survey. 2011. *Mineral Land Classification of the Proposed Riddle Surface Mine Property Site, Stanislaus County, California – For Construction Aggregate*. Last revised: unknown. Available: <http://www.quake.ca.gov/gmaps/WH/smaramaps.htm>. Accessed: December 1, 2014.
- . 2012. *Aggregate Sustainability in California*. Map Sheet 52 (Updated 2012). Map and report. Last revised: 2012. Available: <http://www.conservation.ca.gov/cgs/minerals/mlc/Pages/index.aspx>. Accessed: December 1, 2014.
- California Division of Mines and Geology. 1993. *Mineral Land Classification of Stanislaus County*. Last revised: unknown. Available: <http://www.quake.ca.gov/gmaps/WH/smaramaps.htm>. Accessed: December 1, 2014.
- Office of Mine Reclamation. 2014. *AB 3098 List*. Last revised: October 1. Available: http://www.conservation.ca.gov/omr/SMARA%20Mines/ab_3098_list/Pages/Index.aspx. Accessed: December 1, 2014.
- Stanislaus County. 1986 *Chapter III, Conservation/Open Space*. Last revised: Unknown. Available: <http://www.stancounty.com/planning/pl/gp/gp-sd-chapter3.pdf>. Accessed: December 1, 2014.

3.12 Noise

3.12.1 Introduction

This section discusses the impacts of the plan updates with respect to noise. It lists the thresholds of significance that form the basis of the environmental analysis, describes the noise study area and major sources used in the analysis, provides environmental setting information that is relevant to noise, and assesses whether the plan updates would result significant impacts with respect to noise.

Study Area

The noise study area for the EIR is defined as unincorporated Stanislaus County.

Noise and Vibration Fundamentals

Noise

Noise is commonly defined as unwanted sound that annoys or disturbs people and potentially causes an adverse psychological or physiological effect on human health. Because noise is an environmental pollutant that can interfere with human activities, an evaluation of noise is necessary when considering the environmental impacts of a proposed project.

Sound is mechanical energy (vibration) transmitted by pressure waves over a medium such as air or water and characterized by various parameters, which include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor that is used to characterize the loudness of an ambient (existing) sound level. Although the decibel (dB) scale, a logarithmic scale, is used to quantify sound intensity, it does not accurately describe how sound intensity is perceived by human hearing. The human ear is not equally sensitive to all frequencies in the entire spectrum; therefore, noise measurements are weighted more heavily toward frequencies to which humans are sensitive. The process is called A-weighting, and the noise measurements are in A-weighted decibels, written as dBA. Table 3.12-1 provides definitions for sound measurements and other terminology used in this section, and Table 3.12-2 summarizes typical A-weighted sound levels for different noise sources.

Table 3.12-1. Definition of Sound Measurements

Sound Measurements	Definition
Decibel (dB)	A unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to reference sound pressure amplitude. The reference pressure is 20 micropascals.
A-weighted decibel (dBA)	An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
Maximum sound level (L_{max})	The maximum sound level measured during the measurement period.
Minimum sound level (L_{min})	The minimum sound level measured during the measurement period.
Equivalent sound level (L_{eq})	The equivalent steady-state sound level that, in a stated period of time, would contain the same acoustical energy.
Percentile-exceeded sound level (L_{xx})	The sound level exceeded xx% of a specific time period. L_{10} is the sound level exceeded 10% of the time.
Day-night level (L_{dn})	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10 p.m. to 7 a.m.
Community noise equivalent level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the A-weighted sound levels occurring during the period from 7 p.m. to 10 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10 p.m. to 7 a.m.
Peak particle velocity (peak velocity or PPV)	A measurement of ground vibration, defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state.
Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.

Table 3.12-2. Typical A-Weighted Sound Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	—110—	Rock band
Jet flyover at 1,000 feet		
	—100—	
Gas lawnmower at 3 feet		
	—90—	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	—80—	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	—70—	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	—60—	
		Large business office
Quiet urban daytime	—50—	Dishwasher in next room
Quiet urban nighttime	—40—	Theater, large conference room (background)
Quiet suburban nighttime		
	—30—	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	—20—	
		Broadcast/recording studio
	—10—	
	—0—	

Source: California Department of Transportation 2013.

In general, human sound perception is such that a change in sound level of 1 dB cannot typically be perceived by the human ear, a change of 3 dB is just noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving the sound level.

Different types of measurements are used to characterize the time-varying nature of sound. These measurements include the equivalent sound level (L_{eq}), the minimum and maximum sound levels (L_{min} and L_{max}), percentile-exceeded sound levels (such as L_{10} , L_{20}), the day-night sound level (L_{dn}), and the community noise equivalent level (CNEL). L_{dn} and CNEL values differ by less than 1 dB. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent and treated as such in this assessment.

For a point source, such as a stationary compressor or construction equipment, sound attenuates at a rate of 6 dB per doubling of distance. For a line source, such as free-flowing traffic on a freeway, sound attenuates at a rate of 3 dB per doubling of distance (California Department of Transportation 2013). Atmospheric conditions, including wind, temperature gradients, and humidity, can change how sound propagates over distance and affect the level of sound received at a given location. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound that travels over an acoustically absorptive surface, such as grass, attenuates at a greater rate than

sound that travels over a hard surface, such as pavement. The increased attenuation is typically in the range of 1 to 2 dB per doubling of distance. Barriers such as buildings and topography that block the line of sight between a source and receiver also increase the attenuation of sound over distance.

The operation of heavy construction equipment, particularly pile-driving equipment and impact devices (e.g., pavement breakers), creates seismic waves that radiate along the surface of and downward into the ground. These surface waves can be felt as ground vibration. Vibration from the operation of this equipment can result in effects that range from annoyance of people to damage within structures. Variations in geology and distance result in different vibration levels, containing different frequencies, and displacements. In all cases, vibration amplitudes decrease with increasing distance.

Perceptible groundborne vibration is generally limited to areas within a few hundred feet of construction activities. As seismic waves travel outward from a vibration source, they cause rock and soil particles to oscillate. The actual distance that these particles move is usually only a few ten-thousandths to a few thousandths of an inch. The rate or velocity (in inches per second) at which these particles move is a commonly accepted descriptor of vibration amplitude, peak particle velocity (PPV).

Vibration amplitude, which attenuates over distance, is a complex function of how energy is imparted into the ground and the soil or rock conditions through which the vibration travels. The equation below is used to estimate the vibration level at a given distance for typical soil conditions (Federal Transit Administration 2006). PPV_{ref} is the reference PPV at 25 feet.

$$PPV = PPV_{ref} \times (25/Distance)^{1.5}$$

Table 3.12-3 summarizes typical vibration levels generated by construction equipment at a reference distance of 25 feet as well as other distances, as determined with use of the attenuation equation above.

Table 3.12-3. Vibration Source Levels for Construction Equipment

Equipment	PPV 25 Feet	at	PPV 50 Feet	at	PPV 75 Feet	at	PPV 100 Feet	at	PPV 175 Feet
Pile driver (sonic/vibratory)	0.734		0.2595		0.1413		0.0918		0.0396
Hoe ram ^a or large bulldozer	0.089		0.0315		0.0171		0.0111		0.0048
Loaded trucks	0.076		0.0269		0.0146		0.0095		0.0041
Jackhammer	0.035		0.0124		0.0067		0.0044		0.0019
Small bulldozer	0.003		0.0011		0.0006		0.0004		0.0002

Source: Federal Transit Administration 2006.

^a Representative of rock ripper.

Tables 3.12-4 and 3.12-5 summarize the guidelines developed by the California Department of Transportation (Caltrans) for damage and annoyance potential from transient and continuous vibrations, which are usually associated with construction activity. Equipment or activities that are typical of continuous vibration include excavation equipment, static compaction equipment, use of tracked vehicles, traffic on a highway, vibratory pile drivers, pile-extraction equipment, and vibratory compaction equipment. Equipment or activities that are typical of single-impact (transient) or low-rate repeated impact vibration include impact pile drivers, blasting, drop balls,

pogo-stick compactors, and crack-and-seat equipment (California Department of Transportation 2013).

Table 3.12-4. Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: California Department of Transportation 2013.
Note: Transient sources, such as blasting or drop balls, create a single isolated vibration event. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 3.12-5. Guideline Vibration Annoyance Potential Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: California Department of Transportation 2013.
Note: Transient sources, such as blasting or drop balls, create a single isolated vibration event. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

3.12.2 Environmental Setting

This section describes the federal, state, and local regulations and policies that are applicable to the plan updates and the existing conditions pertaining to noise in the study area. The existing conditions constitute the baseline for this analysis.

Regulatory Setting

This section describes the federal, state, and local regulations related to noise that would apply to the plan updates.

Various federal agencies have set standards for transportation-related noise and vibration sources that are closely linked to interstate commerce, such as aircraft, locomotives, and trucks. The state sets noise standards for those noise sources that are not exempted from regulation, such as

automobiles, light trucks, and motorcycles. Noise and vibration sources associated with industrial, commercial, and construction activities are generally subject to local control through noise ordinances and general plan policies.

Federal

Noise Control Act. The federal Noise Control Act of 1972 (Public Law 92-574) established a requirement for all federal agencies to administer their programs so as to promote an environment that is free of noise that would jeopardize public health or welfare. The U.S. Environmental Protection Agency (EPA) was given the responsibility for:

- Providing information to the public regarding identifiable effects of noise on public health and welfare,
- Publishing information on the levels of environmental noise that will protect the public health and welfare with an adequate margin of safety,
- Coordinating federal research and activities related to noise control, and
- Establishing federal noise emission standards for selected products distributed in interstate commerce.

The Noise Control Act also directs all federal agencies to comply with applicable federal, state, interstate, and local noise control regulations.

Although EPA has the major role in disseminating information to the public and coordinating federal agencies, each federal agency retains authority to adopt noise regulations pertaining to its programs, subject to EPA oversight. At the local level, the key federal agencies are:

- U.S. Department of Housing and Urban Development (HUD): Noise standards for federally funded housing projects
- Federal Aviation Administration (FAA): Noise standards for aircraft noise at airports
- Federal Highway Administration (FHWA): Noise standards for federally funded highway projects
- Federal Transit Administration (FTA): Noise standards for federally funded transit projects
- Federal Railroad Administration (FRA): Noise standards for federally funded rail projects

Environmental Protection Agency. In 1974, in response to the requirements of the Noise Control Act, EPA identified indoor and outdoor noise limits to protect public health and welfare as they relate to communication disruption, sleep disturbance, and hearing damage. Outdoor L_{dn} limits of 55 dB and indoor L_{dn} limits of 45 dB were identified as desirable for protecting against speech interference as well as sleep disturbance in residential, educational, and health care areas. The sound-level criterion for protecting against hearing damage in commercial and industrial areas was identified as a 24-hour L_{eq} value of 70 dB (both outdoors and indoors).

U.S. Department of Housing and Urban Development. HUD has established guidelines for evaluating noise impacts on residential projects that seek financial support under its various grant programs (44 *Federal Register* 135:40860, 40866, January 23, 1979). Sites are generally considered acceptable for residential use if they are exposed to outdoor L_{dn} values of 65 dB or less. Sites are considered normally unacceptable if they are exposed to outdoor L_{dn} values of 65 to 75 dB. Sites are considered

unacceptable if they are exposed to outdoor L_{dn} values above 75 dB. The HUD goal for interior noise in residences is for noise levels not to exceed 45 dB L_{dn} .

Federal Aviation Administration. The Code of Federal Regulations (CFR) Title 24, Part 150, Airport Noise Compatibility Planning, prescribes the procedures, standards, and methodology to be applied to airport noise compatibility planning. Noise levels below 65 L_{dn} are normally considered to be acceptable for noise-sensitive land uses. These are among the criteria applied during the update of the ALUCP.

Federal Highway Administration. FHWA regulations (23 CFR 772) specify procedures for evaluating noise impacts associated with federally funded highway projects and determining whether such impacts justify funding noise abatement actions. The FHWA noise abatement criteria are based on the worst hourly L_{eq} sound levels, not L_{dn} or CNEL values. The noise abatement criterion for residences, parks, schools, and other similar noise-sensitive uses is 67 dBA.

Federal Transit Administration. FTA procedures for the evaluation of noise from transit projects are specified in *Transit Noise and Vibration Impact Assessment* (Federal Transit Administration 2006). The FTA Noise Impact Criteria categorize noise-sensitive land uses as follows:

- **Category 1:** Buildings or parks where quiet is an essential element of their purpose.
- **Category 2:** Residences and buildings where people normally sleep. This includes residences, hospitals, and hotels where nighttime sensitivity is assumed to be of utmost importance.
- **Category 3:** Institutional land uses with daytime and evening use. This category includes schools, libraries, churches, and active parks.

The descriptor L_{dn} is used to characterize noise exposure for residential areas (Category 2). For other noise-sensitive land uses, such as outdoor amphitheaters and school buildings (Categories 1 and 3), the maximum 1-hour L_{eq} during the facility's operating period is used. Noise impacts are based on absolute predicted noise levels and increases in noise associated with the project.

Federal Railroad Administration. FRA noise standards are the same as those specified by FTA.

State

State of California General Plan Guidelines. The *State of California General Plan Guidelines* (Office of Planning and Research 2003) for noise elements of local general plans include a compatibility chart regarding sound level/land use that categorizes, by land use, outdoor L_{dn} ranges in up to four categories (normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable). For many land uses, the guidelines indicate overlapping L_{dn} ranges for two or more compatibility categories.

The Noise Element guidelines chart identifies the normally acceptable range for low-density residential uses as less than 60 dB and the conditionally acceptable range as 55 to 70 dB. The normally acceptable range for high-density residential uses is identified as L_{dn} values below 65 dB, and the conditionally acceptable range is identified as 60 to 70 dB. For educational and medical facilities, L_{dn} values below 70 dB are considered normally acceptable, and L_{dn} values of 60 to 70 dB are considered conditionally acceptable. For office and commercial land uses, L_{dn} values below 70 dB are considered normally acceptable, and L_{dn} values of 67.5 to 77.5 dB are categorized as conditionally acceptable.

These overlapping L_{dn} ranges indicate that local conditions (existing sound levels and community attitudes toward dominant sound sources) should be considered in evaluating land use compatibility at specific locations.

California Noise Insulation Standards. Title 24 of the California Code of Regulations (the California Building Code) contains sound transmission standards that apply to common interior walls, partitions, and floor/ceiling assemblies between adjacent dwelling units and sleeping units or between dwelling units and sleeping units and adjacent public areas such as halls, corridors, stairs, or service areas. Standards related to allowable interior noise levels are also specified and state that interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room.

Division of Aeronautics Noise Standards. Title 21, Chapter 5000, of the California Code of Regulations identifies noise compatibility standards for airport operations. Section 5014 of the code states that the standard for the acceptable level of aircraft noise for persons living in the vicinity of airports is a CNEL of 65 dB. Land uses such as residences, schools, hospitals, or places of worship that are exposed to aircraft noise that exceeds 65 dB CNEL are deemed to be in a noise impact area. This standard forms the basis for the limitation that no proprietor of an airport shall operate an airport within a noise impact area, based on the standard of 65 dB CNEL, unless the operator has applied for or received a variance.

Local

Stanislaus County General Plan

Noise Element

The purpose of the existing Noise Element of the general plan is to limit the community's exposure to excessive noise. It contains several related goals and policies, as well as two implementation measures relevant to this analysis. The Noise Element also establishes land use compatibility standards for noise (see Figure 3.12-1).

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.

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 spaces 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 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 in Table 4.
2. New development of industrial, commercial or other noise generating land uses will not be permitted if the 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 the resulting noise levels will exceed the performance standards contained in Table 4 in areas containing residential or other noise sensitive land uses.

Table 4
Maximum Allowable Noise Exposure—Stationary Noise Sources

	Daytime	Nighttime
	7 a.m. to 10 p.m.	10 p.m. to 7 a.m.
Hourly L_{eq} , dBA	55	45
Maximum level, dBA	75	65

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

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

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.

Stanislaus County Noise Ordinance

Chapter 10.46 of the Stanislaus County Code (the Noise Control Ordinance) was adopted by the county in February 2010. The ordinance states that it is unlawful for any person at any location within the unincorporated area of the county to create any noise or to allow the creation of any noise that causes the exterior noise level, when measured at any property situated in either the incorporated or unincorporated area of the county, to exceed exterior noise level standards (see Table 3.12-6).

Table 3.12-6. Exterior Noise-Level Standards

Designated Noise Zones	Maximum A-weighted Sound Level (L_{max})	
	7 a.m. to 9:59 p.m.	10 p.m. to 6:59 a.m.
Noise Sensitive	45	45
Residential	50	45
Commercial	60	55
Industrial	75	75

The standards in Table 3.12-6 are adjusted, as indicated in Table 3.12-7.

Table 3.12-7. Cumulative Duration Allowance Standards

Cumulative Duration	Allowance Decibels
Equal to or greater than 30 minutes per hour	Table 3.12-6 plus 0 dB
Equal to or greater than 15 minutes per hour	Table 3.12-6 plus 5 dB
Equal to or greater than 5 minutes per hour	Table 3.12-6 plus 10 dB
Equal to or greater than 1 minute per hour	Table 3.12-6 plus 15 dB
Less than 1 minute per hour	Table 3.12-6 plus 20 dB

The ordinance further states that, in the event that the measured ambient noise level exceeds the applicable noise level standard above, the ambient noise level shall become the applicable exterior noise-level standard. The ordinance limits construction noise to 75 dBA at any receiving property line between the hours of 7 p.m. and 7 a.m. With regard to vibration, the ordinance states that activity that generates perceptible vibration or vibration that exceeds 0.01 inch per second at or beyond a property boundary is prohibited.

Stanislaus County Airport Land Use Compatibility Plan

The Stanislaus County ALUCP identifies noise compatibility standards for a wide variety of land uses. In summary, the plan states that all new residential development and children's schools are deemed incompatible within the projected CNEL 60 dB contour of each airport. New nonresidential development is deemed incompatible in locations where the airport-related noise exposure would be highly disruptive to the specific land use. The plan provides specific applicable criteria for various land use types.

The noise data has been updated for the proposed ALUCP that is being evaluated in this EIR and is integrated into that plan.

Existing Conditions

The primary noise generators within Stanislaus County are associated with transportation (i.e., airports, freeways, arterial roadways, railroads), with industrial and agricultural operations generating more localized noise. Local collector streets are not considered significant noise sources because traffic volumes and speeds are generally much lower than they are on freeways and arterial roadways. Generally, transportation-related noise is the dominant source within urban environments. Similar to the environmental setting for noise, the vibration environment is typically dominated by traffic from nearby roadways and activity on construction sites. Heavy trucks can generate groundborne vibrations that vary, depending on vehicle type, weight, and pavement condition. Heavy trucks typically operate on major streets. Nonetheless, vibration levels adjacent to roadways are typically not perceptible.

Ambient noise levels in Stanislaus County vary widely, depending on proximity to noise generators such as major roads, airports, and rail lines. The major noise sources in the county are described below.

Motor Vehicle Traffic

Motor vehicles are a primary source of noise in Stanislaus County, particularly near major, primary, and secondary arterials. Interstate 5 (I-5) and State Route 99 (SR-99), which serve high volumes of inter-regional traffic, are the noisiest corridors (Stanislaus County 2005). Traffic in these corridors generate noise levels in excess of 70 dBA CNEL. Noise levels can also exceed 70 dBA CNEL near SR-108 and SR-120 as well as in proximity to local roads. Therefore, noise-sensitive land uses in the vicinity of these and other heavily traveled corridors can be exposed to excessive noise (Stanislaus Council of Governments 2014).

Traffic noise along major roadways and highways has been modeled using traffic data provided by the project traffic consultant (Fehr & Peers 2015) and traffic noise emissions data from the FHWA Traffic Noise Model (TNM). Table 3.12-8 summarizes the results of traffic noise modeling analysis for base year (2014) conditions. Noise levels were calculated for receivers located 75 feet from roadway centerline.

Table 3.12-8. Traffic Noise Modeling Results for Base Year Conditions (2014)

Link	Roadway	Segment Location	ADT	L _{dn}
1	26 Mile Road	Carter Road–Eastman Road	1,500	54
2	26 Mile Road	Dunn Ranch Road–Gilbert Road	2,300	56
3	9th Street	E Street–D Street	15,900	64
4	August Road	Prairie Flower Road–Mitchell Road	1,300	54
5	Bacon Road	Hammett Road–Toomes Road	1,000	53
6	Bacon Road	Hammett Road–Williams Road	1,400	54
7	Bacon Road	Jackson Road–Hart Road	800	52
8	Beckwith Road	Hart Road–Hammett Road	3,600	58
9	Beckwith Road	Finney Road–Toomes Road	3,800	58
10	Beckwith Road	Jackson Road–Hart Road	2,100	56
11	Berkeley Avenue	Ramson Drive–Paulson Road	6,100	60
12	Blue Gum Avenue	Morse Road–Dakota Avenue	2,700	57
13	Bradbury Road	Morgan Road–Crows Landing Road	1,300	54
14	Bradbury Road	Blaker Road–Central Avenue	1,800	55
15	Bradbury Road	Walnut Road–Soderquist Road	2,100	56
16	Bradbury Road	Commons Road–Washington Road	2,600	57
17	Bradbury Road	Tegner Road–Walnut Road	2,600	57
18	Brier Road	Berkeley Avenue–Johnson Road	1,400	54
19	Carpenter Road	Ruble Road–Crows Landing Road	1,500	54
20	Carpenter Road	Fulkerth Road–Monte Vista Avenue	5,300	60
21	Carpenter Road	Service Road–Redwood Road	6,900	61
22	Central Avenue	Hilmar Road–Bradbury Road	1,500	54
23	Central Avenue	Linwood Avenue–Main Street	1,500	54
24	Central Avenue	Tuolumne Road–Monte Vista Road	1,600	55
25	Church Street	Milnes Road–Parker Road	2,800	57
26	Claribel Road	Albers Road–Oakdale Waterford Hwy	1,700	55
27	Claribel Road	Bentley Road–Albers Road	5,800	60
28	Claribel Road	Langworth–Eleanor Avenue	6,500	61

Link	Roadway	Segment Location	ADT	L _{dn}
29	Crows Landing Road	Clausen Road–Harding Road	5,000	59
30	Crows Landing Road	Canal Road–FULKERTH	5,200	60
31	Crows Landing Road	Bradbury Road–Ehrlich Road	5,700	60
32	Del Puerto Canyon Road	Diablo Grande Pky–Mt Oso Road	5,500	60
33	E Keyes Road	Hickman Road–Merriam Road	1,800	55
34	E Keyes Road	Geer Road–Berkeley Avenue	2,700	57
35	E Keyes Road	Crows Landing Road–Ustick Road	4,300	59
36	E Keyes Road	Central Avenue–Moffett Road	4,700	59
37	E Keyes Road	Pioneer Road–Mountain View Road	6,300	60
38	E Marshal	SR 33–Pomegranate Avenue	1,900	55
39	E Monte Vista Road	Santa Fe Avenue–Vincent Road	1,600	55
40	E Whitmore	Lockwood Road–Washington Road	5,800	60
41	East Avenue	Johnson Road–Oleander Lane	6,500	61
42	East Avenue	Santa Fe Drive–Hickman Road	2,600	57
43	East Avenue	Verduga Road–Daubenberger Road	3,400	58
44	East Avenue	Quincy Road–Johnson Road	4,200	59
45	Emerald Avenue	Lone Palm Avenue–Kansas Avenue	5,400	60
46	Faith Home Road	Tuolume Road–Monte Vista Road	1,800	55
47	Faith Home Road	CR-J17–Clayton Road	1,400	54
48	Faith Home Road	Keyes Road–Barnhart Road	1,900	55
49	Faith Home Road	Main Street–Fulkerth Road	1,800	55
50	Faith Home Road	Keyes Road–Kaiser Road	1,100	53
51	Faith Home Road	Don Pedro Road–Service Road	2,300	56
52	Faith Home Road	Whitmore Avenue–Roeding Road	2,400	56
53	Finch Road	Garner Road–Codoni Avenue	2,500	56
54	Fink Road	Ward Avenue–Davis Road	1,700	55
55	Fink Road	Bell Road–Medlin Road	1,800	55
56	Finney Road	Beckwith Road–North Avenue	1,100	53
57	Finney Road	Covert Road–Adams Avenue	1,900	55
58	Fulkerth	Central Avenue–Moffett Road	1,900	55
59	Fulkerth	Crows Landing Road–Bystrum Road	1,900	55
60	Fulkerth	Prairie Flower Road–Faith Home Road	2,600	57
61	Fulkerth	Washington Road–Commons Road	3,400	58
62	Garner Road	Leckron Road–Finch Road	7,800	61
63	Geer Road	Santa Fe Avenue–Grayson Road	10,800	63
64	Geer Road	Keyes Road–Barnhart Road	11,100	63
65	Golden State Blvd	Nunes Road–Keyes Road	3,600	58
66	Golf Road	Glenwood Avenue–Linwood Avenue	2,500	56
67	Gratton Road	Keyes Road–Barnhart Road	1,600	55
68	Hammett Road	Covert Road–Bacon Road	1,900	55
69	Harding Road	Commons Road–Faith Home Road	400	49
70	Hart Road	California Avenue–Maza Blvd	2,700	57
71	Hart Road	California Avenue–Paradise Road	2,600	57
72	Hawkeye Avenue	Verduga Road–Waring Road	1,800	55

Link	Roadway	Segment Location	ADT	L _{dn}
73	Herndon Road	River Road–Sorona Avenue	3,900	58
74	Hickman Road	Delaware Road–Lake Road	6,000	60
75	Hickman Road	Monte Vista Avenue–Taylor Road	2,300	56
76	Hills Ferry Road	Stuhr Road–River Road	5,700	60
77	I-5	Davis Road–Stuhr Road	38,100	76
78	I-5	Fink Road–Davis Road	38,100	76
79	I-5	Diablo Grande Pky–Oak Flat Road	38,800	76
80	I-5	Gaffery Road–Ingram Creek Road	41,800	76
81	I-5	Ingram Creek Road–Diablo Grande Pky	43,900	76
82	Jeffrey Drive	Sylvan Avenue–Carl Way	1,400	54
83	Jennings Road	Service Road–Grayson Road	900	52
84	Jennings Road	Keyes Road–Grayson Road	2,800	57
85	Jennings Road	Keyes Road–Barnhart Road	2,900	57
86	Johnson Road	Merritt Street–East Avenue	3,500	58
87	Johnson Road	East Avenue–Evelle Lane	2,900	57
88	Keyes Road	Blaker Road–Central Avenue	4,800	59
89	Kiernan Road	Stratos Way–SR 108	16,400	65
90	Kiernan Road	CR 99 Off Ramp–CR 99 On Ramp	33,800	68
91	Langworth Road	Mesa Drive–Patterson Road	1,800	55
92	Langworth Road	Milnes Road–Rice Road	2,200	56
93	Lester Road	Hawkeye Avenue–Tuolumne Road	1,700	55
94	Linwood Avenue	Paulson Road–Johnson Road	1,200	53
95	Main Street	Kern Street–Fresno Avenue	6,000	60
96	Mariposa Road	Farrar Avenue–Finch Road	2,800	57
97	Maze Blvd	Carpenter Road–Rosemore Avenue	14,000	64
98	Maze Blvd	Carpenter Road–Meadow Lane	13,100	64
99	Maze Blvd	Hart Road–Texas Avenue	14,500	64
100	Maze Blvd	McCracken Road–Kasson Road	19,000	65
101	McCracken Road	Gaffery Road–Spencer Road	900	52
102	Milnes Road	Santa Fe Avenue–Dewitt Road	4,600	59
103	Milnes Road	Church Street–Langworth Road	5,800	60
104	Milton Road	Dunton Road–Sonora Road	1,200	53
105	Mitchell Road	Harding Road–Bradbury Road	1,000	53
106	Mitchell Road	Clayton Road–Linwood Avenue	1,400	54
107	Mitchell Road	Hilmar Road–August Road	1,400	54
108	Mitchell Road	August Road–Williams Avenue	1,900	55
109	Morgan Road	Grayson Road–Keyes Road	1,800	55
110	Motsinger Road	Faith Home Road–Anna Avenue	1,700	55
111	N Santa Fe Avenue	Monte Vista Avenue–Vincent Road	2,100	56
112	N Santa Fe Avenue	Keyes Road–Barnhart Road	3,300	58
113	Oakdale-Waterford Hwy	Claribel Road–Rice Road	3,400	58
114	Oakdale-Waterford Hwy	Ellenwood Road–Milnes Road	5,700	60
115	Orange Blossom Road	Wamble Road–Lancaster Road	2,600	57
116	Orange Blossom Road	Rodden Road–Olive Avenue	2,100	56

Link	Roadway	Segment Location	ADT	L _{dn}
117	Orange Blossom Road	Stone Avenue–Sonora Road	1,100	53
118	Paradise Road	Michigan Avenue–Pauline Avenue	3,900	58
119	Paradise Road	Shiloh Road–Hart Road	4,500	59
120	Parker Road	Wellsford Road–Church Street	3,200	58
121	Paulson Road	Linwood Avenue–Daubenberger Road	2,000	56
122	Pioneer Road	Redwood–Grayson Road	1,200	53
123	Pioneer Road	Keyes Road–Grayson Road	1,400	54
124	Quincy Road	Monte Vista Avenue–Valdosta Drive	2,700	57
125	Redwood Road	Central Avenue–Moffett Road	400	49
126	Riverside Drive	Lapham Drive–Nathan Avenue	3,900	58
127	Roselle Road	Sylvan Avenue–Plainview Road	7,100	61
128	Rosemore Avenue	Kansas Avenue–Elm Avenue	2,300	56
129	Rouse Avenue	Alturas Avenue–Leon Avenue	3,600	58
130	Santa Fe Avenue	Service Road–7th Street	6,000	60
131	Santa Fe Avenue	Hatch Road–Leedom Road	7,700	61
132	Santa Fe Avenue	Geer Road–Redwood Road	2,600	57
133	Santa Fe Drive	East Avenue–Linwood Avenue	2,300	56
134	Service Road	Carpenter Road–Ustick Road	1,800	55
135	Service Road	Mountain View Road–Tully Road	1,900	55
136	Service Road	Ustick Road–Crows Landing Road	1,600	55
137	Service Road	Griffin Road–Santa Fe Avenue	1,900	55
138	Service Road	Washington Road–Pioneer Road	2,100	56
139	Service Road	Sanders Road–Vivian Road	1,000	53
140	Service Road	Esmar Road–Faith Home Road	3,700	58
141	Shoemake Avenue	Dakota Avenue–Finney Road	1,400	54
142	Shoemake Avenue	Hart Road–Edsel Lane	700	51
143	Shoemake Avenue	Gates Road–Dunn Road	900	52
144	Sierra Road	Laughlin Road–Wamble Road	1,100	53
145	Sierra Road	Stearns Road–Orsi Road	3,800	58
146	Sisk Road	Wallasey Way–Wessex Lane	10,300	63
147	SR 108	St Francis Avenue–Ladd Road	20,000	71
148	SR 108	SR 219–Charity Way	22,700	71
149	SR 120	Sawyer Avenue–Walnut Avenue	13,700	69
150	SR 120	Pioneer Avenue–Sawyer Avenue	13,700	69
151	SR 120	Wamble Road–Orange Blossom Road	15,600	70
152	SR 120	Dillwood Road–Orange Blossom Road	22,600	71
153	SR 120	26 Mile Road–Rodden Road	28,500	72
154	SR 120	Rodden Road–North Street	28,200	72
155	SR 33	SR 132–Welty Road	2,100	58
156	SR 33	D Street–E Street	3,500	60
157	SR 33	B Street–Grayson Road	4,600	62
158	SR 33	Fruit Avenue–Baldwin Road	5,000	62
159	SR 33	Mulberry Avenue–Baldwin Road	4,600	62
160	SR 33	Eucalyptus Avenue–Olive Avenue	6,100	63

Link	Roadway	Segment Location	ADT	L _{dn}
161	SR 33	I Street–El Circulo Avenue	7,200	63
162	SR 33	5th Street–6th Street	5,300	62
163	SR 33	5th Street–4th Street	5,500	62
164	SR 33	Inyo Avenue–Sanches Road	8,500	64
165	SR 33	Lundy Road–Stuhr Road	6,500	63
166	SR 33	4th Street–Ike Crow Road	5,900	63
167	SR 33	J T Crow Road–Anderson Road	6,800	63
168	SR 33	Eastin Road–J T Crow Road	7,100	63
169	SR 33	Stanislaus Street–Inyo Avenue	8,800	64
170	SR 33	6th Street–Fink Road	7,600	64
171	SR 33	Sperry Avenue–C Street	7,300	64
172	SR 33	El Circulo Avenue–E Street	8,700	64
173	SR 33	Las Palmas Avenue–Salado Avenue	10,100	65
174	SR 33	Poppy Avenue–Sperry Avenue	8,400	64
175	SR 33	Merced Street–Kern Street	9,900	65
176	SR 33	Mariposa Street–Kern Street	9,700	65
177	SR 4	Milton Road–Waverly Road	7,400	64
178	SR 99	Golf Road–Griffith Avenue	54,400	77
179	SR 99	Lander Avenue–Golf Road	54,400	77
180	SR 99	Linwood Avenue–Lander Avenue	69,500	78
181	SR 99	Monte Vista Avenue–Taylor Road	70,000	78
182	SR 99	Fulkerth Road–Tuolumne Road	76,100	79
183	SR 99	Canal Drive–Main Street	78,900	79
184	SR 99	Keyes Road–Taylor Road	90,200	79
185	SR 99	Service Road–Pine Street	92,500	79
186	SR 99	Whitmore Avenue–Pine Street	92,600	79
187	SR 99	Service Road–Mitchell Road	99,900	80
188	SR 99	Hatch Road–9th Street	100,700	80
189	SR 99	Crows Landing Road–9th Street	100,200	80
190	SR 99	Hatch Road–Whitmore Avenue	101,800	80
191	SR 99	Faith Home Road–Mitchell Road	106,200	80
192	SR 99	Pelandale Avenue–Beckwith Road	107,000	80
193	SR 99	Crows Landing Road–Zeff Road	108,000	80
194	SR 99	Sierra Drive–Tuolumne Blvd	115,300	80
195	SR 99	Pelandale Avenue–SR 219	109,700	80
196	SR 99	Hammett Road–SR 219	112,100	80
197	SR 99	Kansas Avenue–SR 132	123,000	81
198	SR 99	Beckwith Road–Carpenter Road	124,100	81
199	SR 99	Carpenter Road–9th Street	124,600	81
200	SR 99	Woodland Avenue–9th Street	124,600	81
201	Vivian Road	Grayson Road–Keyes Road	1,600	55
202	Vivian Road	Whitmore Avenue–Hackett Road	2,500	56
203	W Grayson Road	Morgan Road–Blaker Road	1,300	54
204	W Grayson Road	Vivian Road–Carpenter Road	2,300	56

Link	Roadway	Segment Location	ADT	L _{dn}
205	W Grayson Road	River Road–SR 33	5,800	60
206	W Keyes Road	Crows Landing Road–Ustick Road	2,300	56
207	W Monte Vista Road	Carpenter Road–Vivian Road	600	51
208	W Stuhr Road	Bell Road–Jorgensen Road	1,300	54
209	W Stuhr Road	I-5–Bell Road	1,300	54
210	Ward Avenue	Elfers Avenue–Marshall Road	1,500	54
211	Washington Road	Idaho Road–Bradbury Road	1,400	54
212	Wellsford Road	Garst Road–Dusty Lane	1,000	53
213	Yosemite (SR 132)	Old La Grange Road–SR 132	2,000	63
214	Yosemite (SR 132)	La Grange Road–Old La Grange Road	2,500	64
215	Yosemite (SR 132)	Crabtree Road–Roberts Ferry Road	3,000	65
216	Yosemite (SR 132)	La Grange Road–Lake Road	3,000	65
217	Yosemite (SR 132)	Lake Road–Rushing Road	3,000	65
218	Yosemite (SR 132)	Rushing Road–Crabtree Road	3,000	65
219	Yosemite (SR 132)	Rushing Road–Crabtree Road	3,000	65
220	Yosemite (SR 132)	Baker Street–Appling Road	5,600	67
221	Yosemite (SR 132)	Baker Street–E Street	5,900	67
222	Yosemite (SR 132)	H Street–Root Road	8,600	69
223	Yosemite (SR 132)	Lincoln Avenue–Mariposa Road	17,900	72
224	Yosemite (SR 132)	Santa Fe Avenue–F Street	9,800	70
225	Yosemite (SR 132)	Reinway Avenue–Pasadena Avenue	10,100	70
226	Yosemite (SR 132)	Triangle Ranch Road–Albers Road	9,800	70
227	Yosemite (SR 132)	Garner Road–Creekwood Drive	16,000	72
228	Yosemite (SR 132)	Covena Avenue–Santa Cruz Avenue	19,900	73
229	Yosemite (SR 132)	El Vista Avenue–Colfax Avenue	20,400	73
230	Yosemite (SR 132)	G Street–H Street	11,300	70
231	Yosemite (SR 132)	Parry Road–Mitchell Road	21,000	73
232	Yosemite (SR 132)	C Street–E Street	22,500	73
233	Yosemite (SR 132)	E Street–SR 108	22,500	73
234	Yosemite (SR 132)	Covena Avenue–Kerr Avenue	24,500	74
235	Yosemite (SR 132)	A Street–Santa Fe Avenue	16,500	72
236	Yosemite (SR 132)	A Street–B Street	22,500	73
237	Yosemite (SR 132)	North Street–A Street	28,300	74
238	Yosemite (SR 132)	B Street–C Street	22,500	73

Aircraft Operation

In 1978, the Stanislaus County Airport Land Use Commission adopted the county's first Airport Land Use Commission Plan, which was amended in 2004. That plan provided height restrictions and building standards for areas adjacent to the five public and privately owned airports that were in the county at that time:

- Modesto City-County Airport
- Oakdale Municipal Airport

- Patterson Airport
- Turlock Airpark
- Crows Landing Airport (formerly Crows Landing Naval Auxiliary Landing Field)

The proposed ALUCP update (Stanislaus County 2014) provides information and promulgates policies for three airports: Modesto City-County Airport, Oakdale Municipal Airport, and Crows Landing Airport. Since adoption of the 2004 ALUCP, Patterson Airport has closed and the Turlock Airpark is in the process of being sold for non-aeronautical use, thereby making them ineligible for inclusion in the ALUCP update (Stanislaus County 2014).

Modesto City-County Airport is located directly east of Modesto and north of Ceres. Residential uses are located north, west, and south of the airport. Oakdale Municipal Airport and Crow's Landing Airport are generally surrounded by agricultural uses.

The currently adopted 2004 ALUCP does not contain airport noise contours for existing conditions. The 2004 Airport Land Use Commission Plan does provide noise contours for Modesto City-County Airport, but not Oakdale Airport or Crow's Landing Airport. The noise contours for Modesto City-County Airport reported in the 2004 Airport Land Use Commission Plan are shown in Figure 3.12-2.

With regard to Oakdale Airport, the 2004 Airport Land Use Commission Plan states that any noise conflicts, as defined by law, lie within the planning boundaries that conform to the FAA's Regulations Part 77, Objects Affecting Navigable Airspace. The 2004 Airport Land Use Commission Plan further states that noise and safety conflicts around the airport are considered minimal.

At the time that the 2004 Airport Land Use Commission Plan was prepared, the Navy operated Crows Landing Airport, which was called Crows Landing Naval Auxiliary Landing Field. There is no specific information on noise other than this statement: "The Navy has determined agricultural uses are compatible with the type of facility at Crows Landing." The ALUCP for Crows Landing will be updated at such time as plans for the Crows Landing Business Park are completed and there is a better idea of what the future use of the airport will involve.

Railroad Operations

Mainline rail operations in Stanislaus County occur on Burlington Northern Santa Fe (BNSF) Railway and Union Pacific Railroad lines. The BNSF mainline traverses the county, passing through Hughson, Riverbank, and smaller towns; a branch line connects Oakdale with the mainline at Riverbank. Regarding the Union Pacific Railroad, the mainline passes through Modesto, Ceres, and Turlock, adjacent to SR-99, and a branch line runs through Patterson, Newman, and the west side of the county. Low-speed mainline and switching operations also occur on Union Pacific Railroad, Sierra Railroad, Modesto Empire and Traction Company Railroad, and Tidewater Southern Railroad tracks (Stanislaus Council of Governments 2014).

Intermittent noise is generated during rail operations as locomotives start and stop, trains brake, rail cars are coupled and uncoupled, train whistles are blown, and track noise is generated (i.e., from trains' wheels running on the tracks). Based on ambient noise surveys from 2004, the 60 dBA L_{dn} contours are approximately 950 feet from the center of the BNSF mainline, 680 feet from the Union Pacific Railroad mainline, 140 feet from the Tidewater Southern Railroad tracks, and 80 feet from the Sierra Railroad mainline (Stanislaus Council of Governments 2014).

Industrial, Agricultural, and Other Stationary Noise Sources

Industrial and agricultural operations can be significant sources of noise, depending on the types of operations. Typically, heavy equipment and processing equipment are the primary sources of noise. Table 3.12-9 summarizes current industrial and agricultural processing operations in Stanislaus County. In addition, farming operations produce noise intermittently from field preparation, planting, harvesting, and, where applicable, crop dusting activities.

Table 3.12-9. Summary of Stationary Sources in Stanislaus County

Company, Location	Activity	Sources	Operation	Noise Level
Berry Feed and Seed Company, Keyes	Grain processing for seed and animal feeds	Material and air-handling fans, hammermills, roller mills, and heavy truck movements	24 hours/day	60 L _{dn} approximately 1,500 feet from center of plant
California Almond Growers Exchange, Salida	Almond receiving, processing, and storage	Almond shelling, heavy truck movements, elevators, dust collectors, and conveyers	6 a.m. to midnight 5 to 6 days a week	Elevator: 66 dBA at 900 feet; processing: 66 dBA at 200 feet
Dompe Company Warehouse, Crows Landing	Storage, bean cleaning and treatment	Trucks, processing equipment	Primarily during harvest season	60 L _{dn} contour within property boundaries
Flory Industries, Salida	Equipment manufacturing and fabrication	Forklifts, trucks, welding and grinding operations, steam cleaning, compressors, and pump operations	24 hours/day 5 to 6 days a week	60 L _{dn} contour within property boundaries
Grisez Warehouse, Crows Landing	Storage, bean cleaning and treatment	One operating mill, ventilation fans, deliveries, and forklift operation	7 a.m. to 7 p.m.	60 L _{dn} contour approximately 830 feet from center of milling equipment
Modesto Sand and Gravel, Modesto	Heavy equipment storage	Movement of heavy equipment	daytime	60 L _{dn} contour within property boundaries
Bonzi Landfill	Storage, recycling, and disposal of industrial waste	Heavy trucks, processing equipment	6 a.m. to 6 p.m. 5 days/week	Unknown
Gallo Winery, Modesto	Wine production	Cooling towers, refrigeration equipment, various types of small and large fans, trucks	24 hours/day, every day	55 to 70 dBA at plant boundaries
Santa Fe Aggregates, Waterford	Sand and gravel extraction and processing	Backhoe, belt conveyer line, crushers	6 a.m. to 11 p.m.	60 L _{dn} contour at approximately 600 feet for excavation and hauling; 4,500 feet for asphalt processing

Source: Illingworth & Rodkin 2005.

Community Noise Survey

An extensive community noise survey was conducted in 2004 as part of the focused general plan update that occurred in 2005. In general, there is a direct relationship between population and community noise. As population increases, traffic noise increases. In the decade between 2000 and 2010, the population of Stanislaus County increased by about 15% (U.S. Census Bureau 2010). This corresponds to an increase in noise of less than 1 dB. Assuming this level of population growth, the community noise levels in 2004 are considered to be reasonably representative of community noise levels in 2014.

Table 3.12-10 summarizes measurements from the community noise survey.

Table 3.12-10. Summary of Community Noise Survey

Location	Date	Time	Daytime Noise Levels	Nighttime Noise Levels	L _{dn}
Residence, 907 Kiernan Road; 60 feet from the centerline of Hwy 219/Kiernan Road	7/20/04 to 7/21/04	11:00 am to 1:00 pm	65-68	56-65	68
50 feet from the centerline of Hwy 108, near intersection with Hwy 219	7/20/04 to 7/21/04	11:30 am to 12:30 pm	71-74	64-73	76
200 feet to center of SR 99 near lane, 350 feet to UPRR rail line	7/20/04 to 7/22/04	12:20 pm to 2:30 pm	62-65	69-75	78
30 feet from centerline of 132, near county line	7/20/04 to 7/21/04	12:00 pm to 4:00 pm	62-66	51-66	68
50 feet from centerline of 120, near county line	7/20/04 to 7/21/04	1:00 pm to 5:00 pm	70-73	62-72	75
45 feet from centerline of highway 4	7/20/04 to 7/21/04	2:00 pm to 7:00 pm	64-67	54-67	69
30 feet from centerline of Central Ave, south of Ceres near Grayson Rd	7/20/04 to 7/22/04	6:00 pm to 2:00 pm	67-70	59-69	72
65 feet from near lane of I-5	7/21/04 to 7/22/04	11:00 am to 12:00 pm	73-75	73-75	80
50 feet from centerline of SR 33, north of Crows Landing	7/21/04 to 7/22/04	11:30 am to 1:00 pm	66-70	57-69	72
50 feet from centerline of Santa Fe Ave, near Leedom	7/21/04 to 7/22/04	3:30 pm to 4:00 pm	68-75	62-76	78
50 feet from centerline of Santa Fe Ave, near Leedom	8/31/04 to 9/2/04	2:00 pm to 2:00 pm	69-75	60-74	76
3831 Hatch Rd, 65 feet from centerline of Hatch Rd	7/21/04 to 7/22/04	3:30 pm to 4:00 pm	68-71	62-71	74
20 feet west of SPTCo Railroad and 105 feet west of SR 99 in Ceres	5/18/04 to 5/21/04	12:30 pm to 2:00 pm	77-81	71-79	83
30 feet from edge of Service Rd, at Service and Moffett in Ceres	5/18/04 to 5/21/04	1:00 pm to 2:00 pm	69-73	62-73	75
2805 Evalee Lane, 270 feet east of SR 99 in Ceres	5/18/04 to 5/20/04	1:30 pm to 3:00 pm	66-69	60-69	72
Little Orchard Mobile Home Park, 130 feet east of SR 99 in Ceres	5/18/04 to 5/20/04	2:30 pm to 3:00 pm	72-74	64-73	78

Location	Date	Time	Daytime Noise Levels	Nighttime Noise Levels	L _{dn}
60 feet from near lane of I-5 in Westley	8/31/04 to 9/2/04	10:30 am to 10:30 am	72-74	71-75	80
150 feet from AT&SF Railroad in Hughson	8/31/04 to 9/2/04	1:00 pm to 2:00 pm	69-80	59-80	81
50 feet from the Sierra Railroad tracks east of Oakdale	8/31/04 to 9/2/04	3:00 pm to 3:00 pm	66-71	58-70	72
35 feet from Tidewater Railroad, south of Del Rio	8/31/04 to 9/2/04	4:00 pm to 4:00 pm	63-70	43-63	70

Source: Stanislaus County 2005.

3.12.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan updates; the individual impacts relative to the thresholds of significance; mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and the overall significance of the impact with mitigation incorporated.

Major Sources Used in Analysis

The major sources used in this analysis are listed below:

- Stanislaus County General Plan Update, Technical Reference Document for Noise Analysis (Illingworth & Rodkin 2005)
- Stanislaus County General Plan Noise Element (no substantive changes in the general plan update)
- Stanislaus County Noise Ordinance (<http://qcode.us/codes/stanislauscounty/>)
- Stanislaus Council of Governments, 2014 Regional Transportation Plan/Sustainable Communities Strategy Final Programmatic Environmental Impact Report (Stanislaus Council of Governments 2014)
- Stanislaus County Airport Land Use Commission Plan, as amended May 2004 (Stanislaus County 2004)
- Stanislaus County Airport Land Use Compatibility Plan (Stanislaus County 2014)

Approach and Methodology

Noise impacts associated with implementation of the updated general plan have been evaluated at a program level of detail, with a focus on temporary construction-related noise and long-term noise associated with transportation-related growth and land use development. The evaluation of temporary construction noise was based the FTA guidance document, *Transit Noise and Vibration Impact Assessment* (Federal Transit Administration 2006). Noise associated with increased traffic that would occur with implementation of the plan is likely to be the largest contributor to increased transportation noise in the county. Traffic noise was evaluated by using traffic data provided by the project traffic consultant (Fehr & Peers 2015) and traffic noise emissions data from the TNM to compare traffic noise levels from implementation of the plan with existing conditions.

Forecasts regarding how freight rail operations may change in the future are not available. In general, freight operations tend to not change significantly over time. The evaluation of noise from aircraft operations was based on noise data and contours provided in the currently adopted ALUCP reports and the updated ALUCP reports.

Thresholds of Significance

Based on State CEQA Guidelines, Appendix G, the plan updates would have a significant impact with respect to noise if they would:

- Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies.
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels.
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels.
- Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels.

Impacts and Mitigation Measures

Impact NOI-1: Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies (significant and unavoidable)

Construction Noise

Table 3.12-11 summarizes typical construction noise levels for several project types and various phases of construction. The calculation of noise levels at various distances was based on a point-source attenuation of 6 dB per doubling of distance.

Table 3.12-11 indicates that construction activity would result in excessive noise when located close to noise-sensitive uses or occurring at night. Chapter 10.46 of the Stanislaus County Code limits construction noise to 75 dBA at any receiving property line between the hours of 7 p.m. and 7 a.m. Implementation of this code requirement will limit construction noise to a level determined to be acceptable by the county. The noise impact of construction activity is therefore considered to be less than significant. No mitigation is required.

Table 3.12-11. Typical Construction Noise Levels

Construction Phase	Housing					Industrial					Public Works					Non-Residential				
	Distance from Construction (feet)																			
	50	100	200	400	800	50	100	200	400	800	50	100	200	400	800	50	100	200	400	800
	Sound Level (dBA)																			
Ground clearing	85	79	73	67	61	87	81	75	69	63	88	82	76	70	64	91	85	79	73	67
Excavation	89	83	77	71	65	90	84	78	72	66	90	84	78	72	66	87	81	75	69	63
Foundations	82	76	70	64	58	89	83	77	71	65	92	86	80	74	68	87	81	75	69	63
Building/facility construction	81	75	69	63	57	85	79	73	67	61	88	82	76	70	64	88	82	76	70	64
Finishing and cleanup	86	80	74	68	62	89	83	77	71	65	90	84	78	72	66	87	81	75	69	63

Source: U.S. Environmental Protection Agency 1971.

Construction Vibration

Table 3.12-12 summarizes typical construction vibration levels from various types of equipment.

Table 3.12-12. Typical Construction Vibration Levels

Equipment	Distance from Construction (feet)				
	25	50	75	100	175
	Peak Particle Velocity (in/sec)				
Pile driver (impact)	1.518	0.5367	0.2921	0.1898	0.0820
Pile driver (sonic)	0.734	0.2595	0.1413	0.0918	0.0396
Vibratory roller	0.21	0.0742	0.0404	0.0263	0.0113
Hoe ram	0.089	0.0315	0.0171	0.0111	0.0048
Large bulldozer	0.089	0.0315	0.0171	0.0111	0.0048
Caisson drill rig	0.089	0.0315	0.0171	0.0111	0.0048
Loaded truck	0.076	0.0269	0.0146	0.0095	0.0041
Jackhammer	0.035	0.0124	0.0067	0.0044	0.0019
Small bulldozer	0.003	0.0011	0.0006	0.0004	0.0002

Source: Federal Transit Administration 2006.

Table 3.12-12 indicates that construction activity would result in excessive vibration when located close to noise-sensitive uses. Chapter 10.46 of the Stanislaus County Code limits vibration to the perception level or 0.01 inch per second at or beyond a property boundary. Implementation of this code requirement will limit construction vibration to a level determined to be acceptable by the county. The vibration impact of construction activity is therefore considered to be less than significant. No mitigation is required.

Traffic

Predicted traffic noise levels under future conditions in Year 2035 are shown in Table 3.12-13. Noise levels were calculated for receivers located 75 feet from roadway centerline.

Table 3.12-13 indicates that traffic noise levels in Year 2035 would result in noise levels of 60 L_{dn} or greater on several roadway segments within the county. A map illustrating roadway segments where traffic noise levels are predicted to equal or exceed 60 L_{dn} is shown in Figure 3.12-3. New residences and other noise-sensitive land uses constructed on roadway segments with traffic that equals or exceeds 60 L_{dn} would be exposed to excessive noise. Implementation Measure 1 Goal Two, Policy Two in the general plan Noise Element limits the exposure of new noise-sensitive development to traffic noise to a level determined to be acceptable by the county. Noise impacts from traffic on new development are therefore considered to be less than significant. No mitigation is required.

Noise impacts would be significant where future noise levels would equal or exceed 60 L_{dn} and expose existing noise sensitive land uses to these higher levels. Examples of these areas are identified in Table 3.12-13, including link numbers 11, 14-17, 29-32, 35-38, 41, 44, 50-53, 61, 62, 75, and more. Mitigation of this impact would vary, depending on the level of noise, distance of the sensitive receptor from the road, and construction of the affected building. Based on the specific

circumstances, methods of mitigation could include, but are not limited to, installation of a solid wall along the road frontage, retrofitting of existing buildings with double-pane windows, and installation of insulation in walls facing the road. The County does not have a program for mitigating noise impacts affecting existing sensitive receptors. This impact would be significant and unavoidable because there is no feasible program to mitigate the impact.

Table 3.12-13. Future Traffic Noise Levels

Link	Roadway	Segment Location	ADT	2014 L _{dn}	2035 L _{dn}	Increase over 2014 L _{dn} , dB
1	26 Mile Road	Carter Road–Eastman Road	3,200	54	58	+ 4
2	26 Mile Road	Dunn Ranch Road–Gilbert Road	3,200	56	58	+ 2
3	9th Street	E Street–D Street	2,300	64	56	- 8
4	August Road	Prairie Flower Road–Mitchell Road	4,100	54	59	+ 5
5	Bacon Road	Hammett Road–Toomes Road	1,900	53	55	+ 2
6	Bacon Road	Hammett Road–Williams Road	2,600	54	57	+ 3
7	Bacon Road	Jackson Road–Hart Road	1,400	52	54	+ 2
8	Beckwith Road	Hart Road–Hammett Road	4,000	58	58	0
9	Beckwith Road	Finney Road–Toomes Road	5,100	58	59	+ 1
10	Beckwith Road	Jackson Road–Hart Road	2,600	56	57	+ 1
11	Berkeley Avenue	Ramson Drive–Paulson Road	8,500	60	62	+ 2
12	Blue Gum Avenue	Morse Road–Dakota Avenue	2,300	57	56	- 1
13	Bradbury Road	Morgan Road–Crows Landing Road	4,800	54	59	+ 5
14	Bradbury Road	Blaker Road–Central Avenue	5,200	55	60	+ 5
15	Bradbury Road	Walnut Road–Soderquist Road	5,400	56	60	+ 4
16	Bradbury Road	Commons Road–Washington Road	5,900	57	60	+ 3
17	Bradbury Road	Tegner Road–Walnut Road	6,000	57	60	+ 3
18	Brier Road	Berkeley Avenue–Johnson Road	4,100	54	59	+ 5
19	Carpenter Road	Ruble Road–Crows Landing Road	2,600	54	57	+ 3
20	Carpenter Road	Fulkerth Road–Monte Vista Avenue	7,400	60	61	+ 1
21	Carpenter Road	Service Road–Redwood Road	9,100	61	62	+ 1
22	Central Avenue	Hilmar Road–Bradbury Road	1,500	54	54	0
23	Central Avenue	Linwood Avenue–Main Street	1,500	54	54	0
24	Central Avenue	Tuolumne Road–Monte Vista Road	2,600	55	57	+ 2
25	Church Street	Milnes Road–Parker Road	2,600	57	57	0
26	Claribel Road	Albers Road–Oakdale Waterford Hwy	1,600	55	55	0
27	Claribel Road	Bentley Road–Albers Road	5,700	60	60	0
28	Claribel Road	Langworth–Eleanor Avenue	6,500	61	61	0
29	Crows Landing Road	Clausen Road–Harding Road	14,000	59	64	+ 5
30	Crows Landing Road	Canal Road–FULKERTH	10,400	60	63	+ 3
31	Crows Landing Road	Bradbury Road–Ehrlich Road	18,200	60	65	+ 5
32	Del Puerto Canyon Road	Diablo Grande Pkwy–Mt Oso Road	22,500	60	66	+ 6
33	E Keyes Road	Hickman Road–Merriam Road	2,300	55	56	+ 1
34	E Keyes Road	Geer Road–Berkeley Avenue	2,900	57	57	0

Link	Roadway	Segment Location	ADT	2014 L _{dn}	2035 L _{dn}	Increase over 2014 L _{dn} , dB
35	E Keyes Road	Crows Landing Road–Ustick Road	5,400	59	60	+ 1
36	E Keyes Road	Central Avenue–Moffett Road	6,000	59	60	+ 1
37	E Keyes Road	Pioneer Road–Mountain View Road	6,700	60	61	+ 1
38	E Marshal	SR 33–Pomegranate Avenue	8,600	55	62	+ 7
39	E Monte Vista Road	Santa Fe Avenue–Vincent Road	1,900	55	55	0
40	E Whitmore	Lockwood Road–Washington Road	6,900	60	61	+ 1
41	East Avenue	Johnson Road–Oleander Lane	15,700	61	64	+ 3
42	East Avenue	Santa Fe Drive–Hickman Road	3,200	57	58	+ 1
43	East Avenue	Verduga Road–Daubenberger Road	4,800	58	59	+ 1
44	East Avenue	Quincy Road–Johnson Road	11,400	59	63	+ 4
45	Emerald Avenue	Lone Palm Avenue–Kansas Avenue	5,000	60	59	- 1
46	Faith Home Road	Tuolumne Road–Monte Vista Road	2,900	55	57	+ 2
47	Faith Home Road	CR-J17–Clayton Road	3,300	54	58	+ 4
48	Faith Home Road	Keyes Road–Barnhart Road	3,300	55	58	+ 3
49	Faith Home Road	Main Street–Fulkerth Road	4,000	55	58	+ 3
50	Faith Home Road	Keyes Road–Kaiser Road	6,800	53	61	+ 8
51	Faith Home Road	Don Pedro Road–Service Road	10,100	56	62	+ 6
52	Faith Home Road	Whitmore Avenue–Roeding Road	11,600	56	63	+ 7
53	Finch Road	Garner Road–Codoni Avenue	5,300	56	60	+ 4
54	Fink Road	Ward Avenue–Davis Road	2,100	55	56	+ 1
55	Fink Road	Bell Road–Medlin Road	3,600	55	58	+ 3
56	Finney Road	Beckwith Road–North Avenue	1,400	53	54	+ 1
57	Finney Road	Covert Road–Adams Avenue	1,900	55	55	0
58	Fulkerth	Central Avenue–Moffett Road	4,200	55	59	+ 4
59	Fulkerth	Crows Landing Road–Bystrum Road	4,300	55	59	+ 4
60	Fulkerth	Prairie Flower Road–Faith Home Road	5,000	57	59	+ 2
61	Fulkerth	Washington Road–Commons Road	7,100	58	61	+ 3
62	Garner Road	Leckron Road–Finch Road	15,700	61	64	+ 3
63	Geer Road	Santa Fe Avenue–Grayson Road	10,900	63	63	0
64	Geer Road	Keyes Road–Barnhart Road	11,300	63	63	0
65	Golden State Blvd	Nunes Road–Keyes Road	7,100	58	61	+ 3
66	Golf Road	Glenwood Avenue–Linwood Avenue	3,700	56	58	+ 2
67	Gratton Road	Keyes Road–Barnhart Road	2,000	55	56	+ 1
68	Hammett Road	Covert Road–Bacon Road	2,500	55	56	+ 1
69	Harding Road	Commons Road–Faith Home Road	1,700	49	55	+ 6
70	Hart Road	California Avenue–Maza Blvd	3,100	57	57	0
71	Hart Road	California Avenue–Paradise Road	3,200	57	58	+ 1
72	Hawkeye Avenue	Verduga Road–Waring Road	2,100	55	56	+ 1
73	Herndon Road	River Road–Sorona Avenue	3,800	58	58	0
74	Hickman Road	Delaware Road–Lake Road	7,500	60	61	+ 1
75	Hickman Road	Monte Vista Avenue–Taylor Road	2,500	56	56	0

Link	Roadway	Segment Location	ADT	2014 L _{dn}	2035 L _{dn}	Increase over 2014 L _{dn} , dB
76	Hills Ferry Road	Stuhr Road–River Road	8,700	60	62	+ 2
77	I-5	Davis Road–Stuhr Road	47,700	76	77	+ 1
78	I-5	Fink Road–Davis Road	47,700	76	77	+ 1
79	I-5	Diablo Grande Pkwy–Oak Flat Road	47,800	76	77	+ 1
80	I-5	Gaffery Road–Ingram Creek Road	52,000	76	77	+ 1
81	I-5	Ingram Creek Road–Diablo Grande Pkwy	55,000	76	77	+ 1
82	Jeffrey Drive	Sylvan Avenue–Carl Way	2,500	54	56	+ 2
83	Jennings Road	Service Road–Grayson Road	3,100	52	57	+ 5
84	Jennings Road	Keyes Road–Grayson Road	5,000	57	59	+ 2
85	Jennings Road	Keyes Road–Barnhart Road	5,500	57	60	+ 3
86	Johnson Road	Merritt Street–East Avenue	3,900	58	58	0
87	Johnson Road	East Avenue–Evelle Lane	5,200	57	60	+ 3
88	Keyes Road	Blaker Road–Central Avenue	6,100	59	60	+ 1
89	Kiernan Road	Stratos Way–SR 108	26,100	65	67	+ 2
90	Kiernan Road	CR 99 Off Ramp–CR 99 On Ramp	41,400	68	69	+ 1
91	Langworth Road	Mesa Drive–Patterson Road	2,000	55	56	+ 1
92	Langworth Road	Milnes Road–Rice Road	2,100	56	56	0
93	Lester Road	Hawkeye Avenue–Tuolumne Road	2,200	55	56	+ 1
94	Linwood Avenue	Paulson Road–Johnson Road	5,900	53	60	+ 7
95	Main Street	Kern Street–Fresno Avenue	6,700	60	61	+ 1
96	Mariposa Road	Farrar Avenue–Finch Road	2,700	57	57	0
97	Maze Blvd	Carpenter Road–Rosemore Avenue	9,700	64	62	- 2
98	Maze Blvd	Carpenter Road–Meadow Lane	8,900	64	62	- 2
99	Maze Blvd	Hart Road–Texas Avenue	16,800	64	65	+ 1
100	Maze Blvd	McCracken Road–Kasson Road	23,700	65	66	+ 1
101	McCracken Road	Gaffery Road–Spencer Road	2,900	52	57	+ 5
102	Milnes Road	Santa Fe Avenue–Dewitt Road	5,400	59	60	+ 1
103	Milnes Road	Church Street–Langworth Road	6,300	60	60	0
104	Milton Road	Dunton Road–Sonora Road	2,200	53	56	+ 3
105	Mitchell Road	Harding Road–Bradbury Road	2,100	53	56	+ 3
106	Mitchell Road	Clayton Road–Linwood Avenue	2,700	54	57	+ 3
107	Mitchell Road	Hilmar Road–August Road	3,700	54	58	+ 4
108	Mitchell Road	August Road–Williams Avenue	4,700	55	59	+ 4
109	Morgan Road	Grayson Road–Keyes Road	2,200	55	56	+ 1
110	Motsinger Road	Faith Home Road–Anna Avenue	3,700	55	58	+ 3
111	N Santa Fe Avenue	Monte Vista Avenue–Vincent Road	2,700	56	57	+ 1
112	N Santa Fe Avenue	Keyes Road–Barnhart Road	4,000	58	58	0
113	Oakdale-Waterford Hwy	Claribel Road–Rice Road	5,400	58	60	+ 2
114	Oakdale-Waterford Hwy	Ellenwood Road–Milnes Road	8,400	60	62	+ 2
115	Orange Blossom Road	Wamble Road–Lancaster Road	3,900	57	58	+ 1
116	Orange Blossom Road	Rodden Road–Olive Avenue	4,200	56	59	+ 3

Link	Roadway	Segment Location	ADT	2014 L _{dn}	2035 L _{dn}	Increase over 2014 L _{dn} , dB
117	Orange Blossom Road	Stone Avenue–Sonora Road	3,300	53	58	+ 5
118	Paradise Road	Michigan Avenue–Pauline Avenue	6,400	58	60	+ 2
119	Paradise Road	Shiloh Road–Hart Road	8,100	59	61	+ 2
120	Parker Road	Wellsford Road–Church Street	3,600	58	58	0
121	Paulson Road	Linwood Avenue–Daubenberger Road	4,400	56	59	+ 3
122	Pioneer Road	Redwood–Grayson Road	1,300	53	54	+ 1
123	Pioneer Road	Keyes Road–Grayson Road	1,500	54	54	0
124	Quincy Road	Monte Vista Avenue–Valdosta Drive	3,400	57	58	+ 1
125	Redwood Road	Central Avenue–Moffett Road	3,700	49	58	+ 9
126	Riverside Drive	Lapham Drive–Nathan Avenue	4,300	58	59	+ 1
127	Roselle Road	Sylvan Avenue–Plainview Road	20,000	61	65	+ 4
128	Rosemore Avenue	Kansas Avenue–Elm Avenue	2,400	56	56	0
129	Rouse Avenue	Alturas Avenue–Leon Avenue	3,700	58	58	0
130	Santa Fe Avenue	Service Road–7th Street	7,500	60	61	+ 1
131	Santa Fe Avenue	Hatch Road–Leedom Road	7,900	61	61	0
132	Santa Fe Avenue	Geer Road–Redwood Road	4,200	57	59	+ 2
133	Santa Fe Drive	East Avenue–Linwood Avenue	2,900	56	57	+ 1
134	Service Road	Carpenter Road–Ustick Road	1,800	55	55	0
135	Service Road	Mountain View Road–Tully Road	2,500	55	56	+ 1
136	Service Road	Ustick Road–Crows Landing Road	2,500	55	56	+ 1
137	Service Road	Griffin Road–Santa Fe Avenue	2,600	55	57	+ 2
138	Service Road	Washington Road–Pioneer Road	2,700	56	57	+ 1
139	Service Road	Sanders Road–Vivian Road	3,100	53	57	+ 4
140	Service Road	Esmar Road–Faith Home Road	4,600	58	59	+ 1
141	Shoemake Avenue	Dakota Avenue–Finney Road	1,700	54	55	+ 1
142	Shoemake Avenue	Hart Road–Edsel Lane	2,200	51	56	+ 5
143	Shoemake Avenue	Gates Road–Dunn Road	2,500	52	56	+ 4
144	Sierra Road	Laughlin Road–Wamble Road	1,200	53	53	0
145	Sierra Road	Stearns Road–Orsi Road	4,300	58	59	+ 1
146	Sisk Road	Wallasey Way–Wessex Lane	21,200	63	66	+ 3
147	SR 108	St Francis Avenue–Ladd Road	23,300	71	71	0
148	SR 108	SR 219–Charity Way	26,200	71	72	+ 1
149	SR 120	Sawyer Avenue–Walnut Avenue	17,600	69	70	+ 1
150	SR 120	Pioneer Avenue–Sawyer Avenue	17,700	69	70	+ 1
151	SR 120	Wamble Road–Orange Blossom Road	22,100	70	71	+ 1
152	SR 120	Dillwood Road–Orange Blossom Road	30,400	71	73	+ 2
153	SR 120	26 Mile Road–Rodden Road	33,600	72	73	+ 1
154	SR 120	Rodden Road–North Street	33,700	72	73	+ 1
155	SR 33	SR 132–Welty Road	8,100	58	64	+ 6
156	SR 33	D Street–E Street	10,000	60	65	+ 5
157	SR 33	B Street–Grayson Road	12,100	62	66	+ 4

Link	Roadway	Segment Location	ADT	2014 L _{dn}	2035 L _{dn}	Increase over 2014 L _{dn} , dB
158	SR 33	Fruit Avenue–Baldwin Road	12,200	62	66	+ 4
159	SR 33	Mulberry Avenue–Baldwin Road	13,600	62	66	+ 4
160	SR 33	Eucalyptus Avenue–Olive Avenue	14,900	63	67	+ 4
161	SR 33	I Street–El Circulo Avenue	15,000	63	67	+ 4
162	SR 33	5th Street–6th Street	15,200	62	67	+ 5
163	SR 33	5th Street–4th Street	15,300	62	67	+ 5
164	SR 33	Inyo Avenue–Sanches Road	15,300	64	67	+ 3
165	SR 33	Lundy Road–Stuhr Road	15,300	63	67	+ 4
166	SR 33	4th Street–Ike Crow Road	15,800	63	67	+ 4
167	SR 33	J T Crow Road–Anderson Road	15,800	63	67	+ 4
168	SR 33	Eastin Road–J T Crow Road	16,000	63	67	+ 4
169	SR 33	Stanislaus Street–Inyo Avenue	16,300	64	67	+ 3
170	SR 33	6th Street–Fink Road	16,800	64	67	+ 3
171	SR 33	Sperry Avenue–C Street	16,900	64	67	+ 3
172	SR 33	El Circulo Avenue–E Street	18,500	64	68	+ 4
173	SR 33	Las Palmas Avenue–Salado Avenue	19,700	65	68	+ 3
174	SR 33	Poppy Avenue–Sperry Avenue	20,100	64	68	+ 4
175	SR 33	Merced Street–Kern Street	19,300	65	68	+ 3
176	SR 33	Mariposa Street–Kern Street	20,300	65	68	+ 3
177	SR 4	Milton Road–Waverly Road	13,300	64	66	+ 2
178	SR 99	Golf Road–Griffith Avenue	69,500	77	78	+ 1
179	SR 99	Lander Avenue–Golf Road	69,500	77	78	+ 1
180	SR 99	Linwood Avenue–Lander Avenue	86,500	78	79	+ 1
181	SR 99	Monte Vista Avenue–Taylor Road	88,000	78	79	+ 1
182	SR 99	Fulkerth Road–Tuolumne Road	90,000	79	79	0
183	SR 99	Canal Drive–Main Street	93,900	79	79	0
184	SR 99	Keyes Road–Taylor Road	108,800	79	80	+ 1
185	SR 99	Service Road–Pine Street	113,000	79	80	+ 1
186	SR 99	Whitmore Avenue–Pine Street	113,700	79	80	+ 1
187	SR 99	Service Road–Mitchell Road	119,600	80	81	+ 1
188	SR 99	Hatch Road–9th Street	122,500	80	81	+ 1
189	SR 99	Crows Landing Road–9th Street	122,900	80	81	+ 1
190	SR 99	Hatch Road–Whitmore Avenue	123,000	80	81	+ 1
191	SR 99	Faith Home Road–Mitchell Road	126,000	80	81	+ 1
192	SR 99	Pelandale Avenue–Beckwith Road	127,500	80	81	+ 1
193	SR 99	Crows Landing Road–Zeff Road	132,900	80	81	+ 1
194	SR 99	Sierra Drive–Tuolumne Blvd	135,100	80	81	+ 1
195	SR 99	Pelandale Avenue–SR 219	136,900	80	81	+ 1
196	SR 99	Hammett Road–SR 219	143,600	80	81	+ 1
197	SR 99	Kansas Avenue–SR 132	144,500	81	81	0
198	SR 99	Beckwith Road–Carpenter Road	145,800	81	81	0

Link	Roadway	Segment Location	ADT	2014 L _{dn}	2035 L _{dn}	Increase over 2014 L _{dn} , dB
199	SR 99	Carpenter Road–9th Street	146,100	81	81	0
200	SR 99	Woodland Avenue–9th Street	146,100	81	81	0
201	Vivian Road	Grayson Road–Keyes Road	4,300	55	59	+ 4
202	Vivian Road	Whitmore Avenue–Hackett Road	7,100	56	61	+ 5
203	W Grayson Road	Morgan Road–Blaker Road	3,000	54	57	+ 3
204	W Grayson Road	Vivian Road–Carpenter Road	4,800	56	59	+ 3
205	W Grayson Road	River Road–SR 33	9,500	60	62	+ 2
206	W Keyes Road	Crows Landing Road–Ustick Road	3,300	56	58	+ 2
207	W Monte Vista Road	Carpenter Road–Vivian Road	2,500	51	56	+ 5
208	W Stuhr Road	Bell Road–Jorgensen Road	2,300	54	56	+ 2
209	W Stuhr Road	I-5–Bell Road	6,000	54	60	+ 6
210	Ward Avenue	Elfers Avenue–Marshall Road	7,900	54	61	+ 7
211	Washington Road	Idaho Road–Bradbury Road	1,700	54	55	+ 1
212	Wellsford Road	Garst Road–Dusty Lane	1,500	53	54	+ 1
213	Yosemite (SR 132)	Old La Grange Road–SR 132	2,300	63	63	0
214	Yosemite (SR 132)	La Grange Road–Old La Grange Road	2,900	64	64	0
215	Yosemite (SR 132)	Crabtree Road–Roberts Ferry Road	3,200	65	65	0
216	Yosemite (SR 132)	La Grange Road–Lake Road	3,200	65	65	0
217	Yosemite (SR 132)	Lake Road–Rushing Road	3,200	65	65	0
218	Yosemite (SR 132)	Rushing Road–Crabtree Road	3,200	65	65	0
219	Yosemite (SR 132)	Rushing Road–Crabtree Road	3,200	65	65	0
220	Yosemite (SR 132)	Baker Street–Appling Road	7,000	67	68	+ 1
221	Yosemite (SR 132)	Baker Street–E Street	8,300	67	69	+ 2
222	Yosemite (SR 132)	H Street–Root Road	10,000	69	70	+ 1
223	Yosemite (SR 132)	Lincoln Avenue–Mariposa Road	21,500	72	73	+ 1
224	Yosemite (SR 132)	Santa Fe Avenue–F Street	11,500	70	70	0
225	Yosemite (SR 132)	Reinway Avenue–Pasadena Avenue	11,800	70	70	0
226	Yosemite (SR 132)	Triangle Ranch Road–Albers Road	11,900	70	71	+ 1
227	Yosemite (SR 132)	Garner Road–Creekwood Drive	19,600	72	73	+ 1
228	Yosemite (SR 132)	Covena Avenue–Santa Cruz Avenue	24,100	73	74	+ 1
229	Yosemite (SR 132)	El Vista Avenue–Colfax Avenue	24,500	73	74	+ 1
230	Yosemite (SR 132)	G Street–H Street	12,700	70	71	+ 1
231	Yosemite (SR 132)	Parry Road–Mitchell Road	25,300	73	74	+ 1
232	Yosemite (SR 132)	C Street–E Street	27,400	73	74	+ 1
233	Yosemite (SR 132)	E Street–SR 108	27,400	73	74	+ 1
234	Yosemite (SR 132)	Covena Avenue–Kerr Avenue	29,200	74	74	0
235	Yosemite (SR 132)	A Street–Santa Fe Avenue	18,500	72	72	0
236	Yosemite (SR 132)	A Street–B Street	27,200	73	74	+ 1
237	Yosemite (SR 132)	North Street–A Street	33,100	74	75	+ 1
238	Yosemite (SR 132)	B Street–C Street	27,300	73	74	+ 1

Rail

Based on noise levels measured adjacent to existing tracks, rail operations may result in 60 L_{dn} noise contours extending up to 1,000 feet from tracks. Residences and other noise-sensitive land uses constructed within approximately 1,000 of tracks would be exposed to excessive noise. Implementation Measure 1, under Goal Two, Policy Two in the general plan Noise Element limits the exposure of new residential construction to rail noise to a level determined to be acceptable by the county. Railroad noise is an existing condition. So, existing sensitive receptors are already exposed to this noise. The noise impact from rail operations is therefore considered to be less than significant. No mitigation is required.

The California High Speed Rail Authority plans to institute full high speed rail (HSR) service from the Bay Area to the Los Angeles Basin by 2028 (California High Speed Rail Authority 2015). Service to Sacramento and San Diego is scheduled for Phase 2 of the HSR project, with no date of operation currently scheduled. Service to Sacramento would include construction of an HSR line from Merced through Stanislaus County to Sacramento, with a station anticipated to be located in Modesto. The specific route, track specifications, trainset specifications, and service intervals are unknown at this time, and planning for this line is just beginning. Without these facts, analysis of noise generated by a new HSR facility would be largely speculative and is not included here.

Industry/Stationary Sources

Noise generated by industrial operations and other stationary sources will vary widely, depending on the type of activity and equipment used at each site. Existing industrial operations result in 60 L_{dn} noise contours that extend up to approximately 1,500 feet from facilities. This already affects existing noise sensitive land uses and would not be a new impact on those uses. New residences and other noise-sensitive land uses constructed within approximately 1,500 of industrial operations would be exposed to excessive noise. Implementation Measure 1 under Goal Two, Policy Two in the general plan Noise Element limits the exposure of new noise-sensitive development to industrial noise to a level determined to be acceptable by the county. Implementation Measure 2 will prevent new development of industrial, commercial, or other noise-generating land uses from exposing new or planned noise-sensitive uses to excessive noise. The noise impact from industrial operations and other stationary source is therefore considered to be less than significant. No mitigation is required.

Airports

Figure 3.12-4 shows long-range noise contours for Modesto City-County Airport.

Figure 3.12-5 shows long-range noise contours for Oakdale Municipal Airport.

A noise contour map is not available for Crow's Landing Airport. This facility is not currently in operation and is in the midst of being planned as a major job center to be known as the Crows Landing Industrial Business Park. The county issued a Notice of Preparation of a Draft Environmental Impact Report for the proposed Crows Landing Industrial Business Park project on October 13, 2014. The county anticipates that the Industrial Business Park will require more than 30 years to reach full build-out. The anticipated Phase 1 development (2016 to 2025) would include revitalizing/converting former military Runway 11-29 to support a general aviation (GA) airport. The details of this use are not fully developed; however, the proposed airport will be sized and equipped to accommodate small- to medium-sized air cargo/air freight feeder aircraft (e.g., Cessna Caravan, Beech 99, and Lear jet, retrofitted twin-turboprop commuter aircraft), and the use of large

air cargo aircraft is not considered. At such time as Crows Landing becomes operational, the county would adopt an updated ALUCP for the airport.

The noise contour maps in Figures 3.12-4 and 3.12-5 indicate that new noise-sensitive land uses located in proximity to airports would be exposed to noise that would exceed county noise standards. The compatibility policies in Section 4 of the 2014 ALUCP will limit the exposure of new noise-sensitive construction to airport noise to a level determined to be acceptable by the county. The noise impact from airport operations is therefore considered to be less than significant.

Significance without Mitigation: Significant and Unavoidable

Impact NOI-2: Expose persons to or generate excessive groundborne vibration or groundborne noise levels (less than significant)

The analysis in Impact NOI-1 indicates that construction activity would result in excessive vibration when the activity is located close to noise-sensitive uses. Chapter 10.46 of the Stanislaus County Code limits vibration to the perception level or 0.01 inch per second at or beyond a property boundary. Implementation of this code requirement will limit construction vibration to a level determined to be acceptable by the county. The vibration impact of construction activity is therefore considered to be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact NOI-3: Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project (less than significant)

The 2014 ALUCP states that the long-range noise contours of Modesto City-County Airport are noticeably smaller than the noise contours provided in the 2004 Airport Land Use Commission Plan for the airport. This is attributed to advances in engine and airframe technology that have effectively reduced noise contours, even with an increase in annual operations. The same is expected to be true at Oakdale Municipal Airport. Crow's Landing Airport is not currently in operation, so an increase in airport noise expected once it begins operation as a GA airport. With the exception of Crows Landing, future airport operations in the county are therefore not expected to result in a substantial permanent increase in aircraft noise.

The Crows Landing airport will be surrounded by the proposed industrial business park, which is not a noise-sensitive land use. Furthermore, by law and regulation, the ALUCP adopted in the future for the airport will include policies to limit future development in areas of excessive noise and risk. Based on the preliminary airport layout plan, the county has prepared a preliminary draft noise map for Crows Landing. No excessive noise is expected to reach the nearby community of Crows Landing or the more distant City of Patterson, and the impact is therefore less than significant (Stanislaus County 2014).

Rail operations are not expected to increase substantially. Therefore, they are not expected to result in a substantial permanent increase in noise.

The analysis presented in Impact NOI-1 indicates that noise from traffic and industrial and agricultural operations could result in substantial permanent increases in noise, depending on the specific sources and ambient noise conditions at a given receiver location. Implementation Measure 1 under Goal Two, Policy Two in the general plan Noise Element limits the exposure of new noise-

sensitive development to industrial noise to a level determined to be acceptable by the county. Implementation Measure 2 under Goal Two, Policy Two prevents new development of industrial, commercial, or other noise-generating land uses from exposing new or planned noise-sensitive uses to excessive noise. The limitations on noise that will occur as a result of Implementation Measures 1 and 2 will prevent permanent noise increases from being substantial. This impact is therefore considered to be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact NOI-4: Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (less than significant)

The analysis presented in Impact NOI-1 indicates that noise from construction of projects in implementation of the general plan could result in substantial temporary increases in noise, depending on the specific sources and ambient noise conditions at a given receiver location. Chapter 10.46 of the Stanislaus County Code limits construction noise to 75 dBA at any receiving property line between the hours of 7 p.m. and 7 a.m. Implementation of this code requirement will limit construction noise to a level determined to be acceptable by the county and prevent temporary noise increases from being substantial. This impact is therefore considered to be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact NOI-5: Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels (less than significant)

As described in *Regulatory Setting* above, there are three airport land use plan areas in the county. The noise contour maps in Figures 3.12-3 and 3.12-4 indicate that new noise-sensitive land uses located in proximity to airports would be exposed to noise that would exceed county noise standards. The compatibility policies in Section 4 of the 2014 ALUCP will limit the exposure of new noise-sensitive construction to airport noise to a level determined to be acceptable by the county. The Crows Landing airport preliminary draft noise map indicates that the future GA airport will not exceed acceptable noise levels. The noise impact from airport operations is therefore considered to be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact NOI-6: Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels (less than significant)

There are numerous small, private airstrips in the county serving the agricultural industry. None of the proposed changes in the general plan would result in changes to these existing operations. This impact is therefore considered less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

3.12.4 References Cited

Printed References

- California Department of Transportation. 2013. *Transportation and Construction Vibration Guidance Manual*. Sacramento, CA.
- California High Speed Rail Authority. 2015. *Project Update Report to the California State Legislature*. Sacramento, CA. March 1.
- California Office of Planning and Research. 2003. *State of California General Plan Guidelines*.
- Federal Transit Administration. 2006. *Transit Noise and Vibration Impact Assessment*. Washington, D.C.
- Illingworth & Rodkin. 2005. *Stanislaus County General Plan Update Technical Reference Document for Noise Analysis*. Petaluma, CA.
- Stanislaus Council of Governments. 2014. *Regional Transportation Plan/Sustainable Communities Strategy Final Programmatic Environmental Impact Report*.
- Stanislaus County. 2004. *Stanislaus County Airport Land Use Commission Plan, as amended*. Modesto, CA.
- . 2005. *Stanislaus County General Plan Update Technical Reference Document for Noise Analysis*. Modesto, CA.
- . 2014. *Stanislaus County Airport Land Use Compatibility Plan*. Modesto, CA.
- . 2014. *Crows Landing Airport Land Use Compatibility Plan (October 2014 Draft) Compatibility Policy Map: Noise*. Available: <http://www.crowsbizpark.biz/pdf/cro-map-1.pdf>. Accessed: March 13, 2015.
- U.S. Census Bureau. 2010. *Census of Population and Housing*. Available: <http://www.census.gov/prod/www/decennial.html> Accessed: 3/4/15.
- U.S. Environmental Protection Agency. 1971. *Noise from Construction Equipment and Operation, Building Equipment, and Home Appliances*. Washington, DC.

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

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



NORMAL ACCEPTABLE

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



CONDITIONALLY ACCEPTABLE

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



NORMALLY UNACCEPTABLE

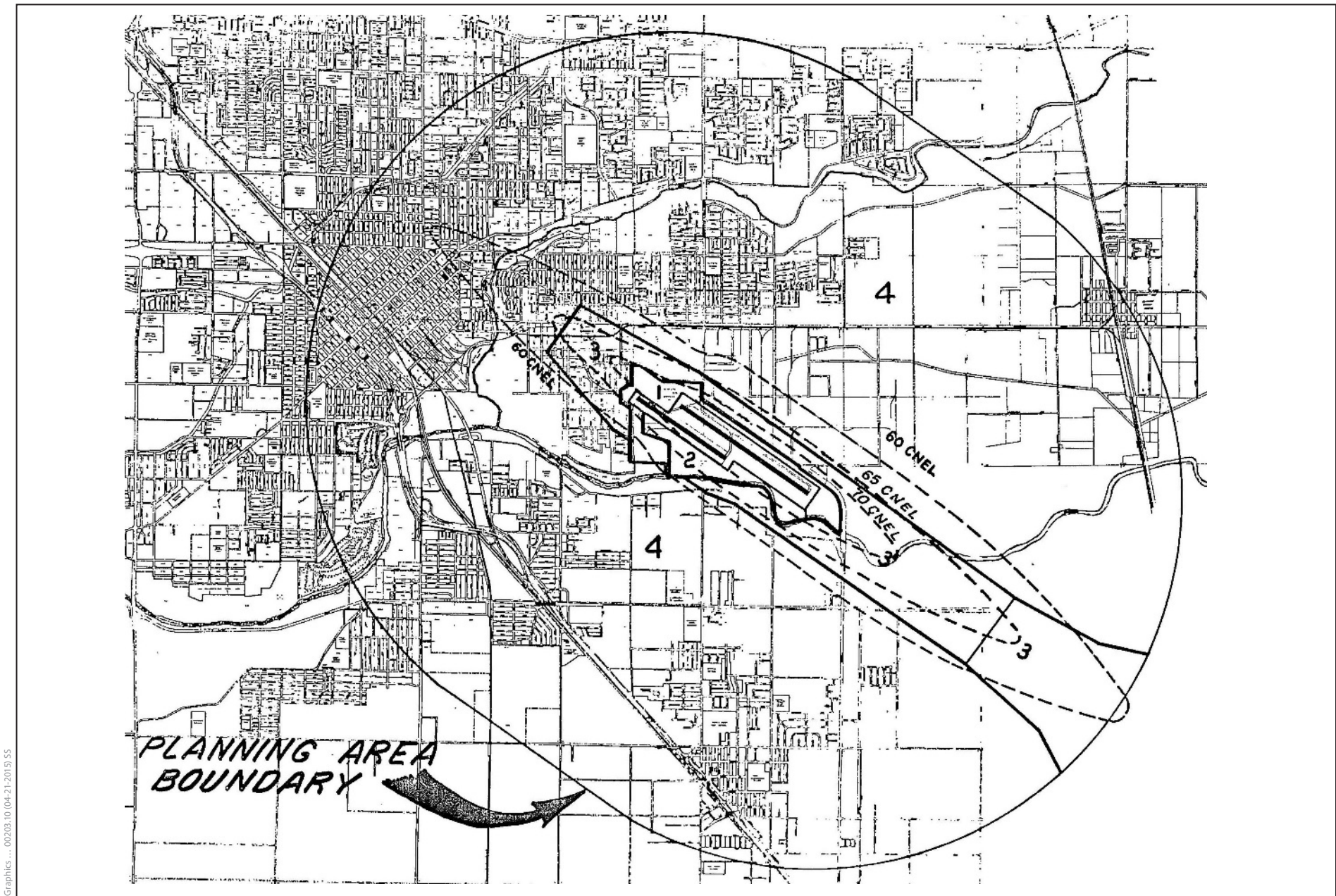
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



CLEARLY UNACCEPTABLE

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

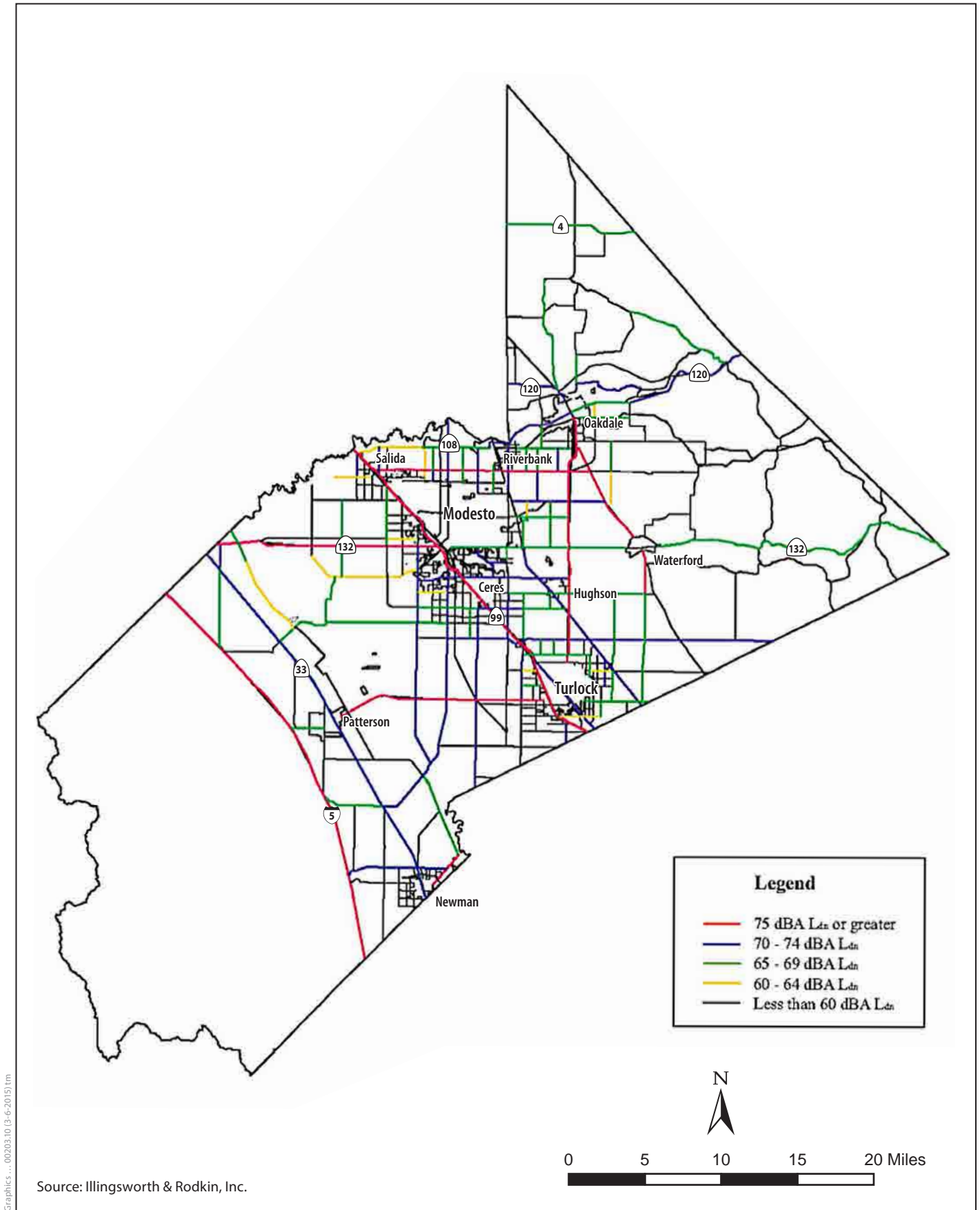
Figure 3.12-1
Land Use Compatibility for Community Noise Environments



Graphics ... 00203.10 (04-21-2015) S5



Figure 3.12-2
 Noise Contours for Modesto City-County Airport
 from the 2004 Airport Land Use Commission Plan

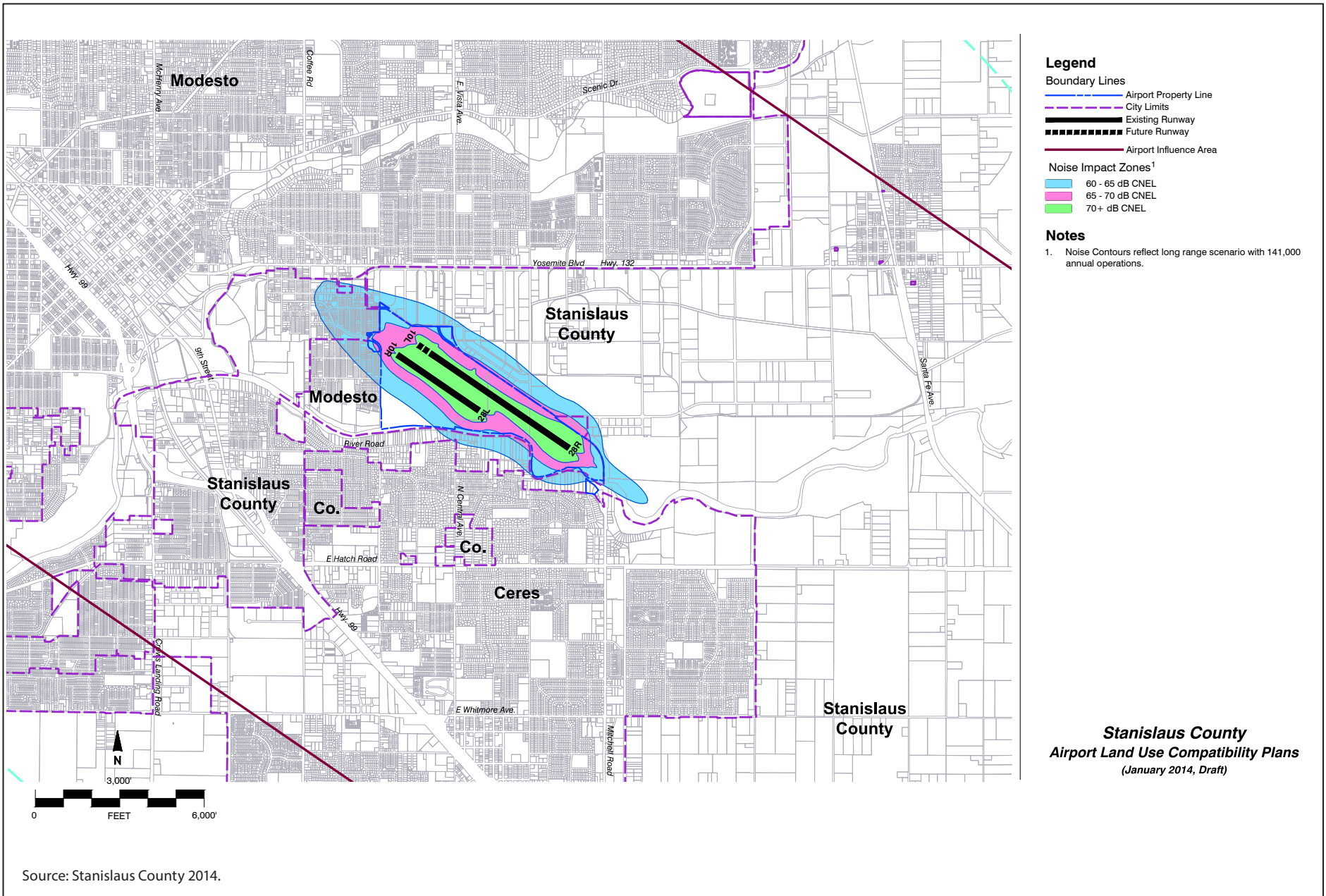


Graphics ... 00203.10 (3-6-2015).tm

Source: Illingsworth & Rodkin, Inc.



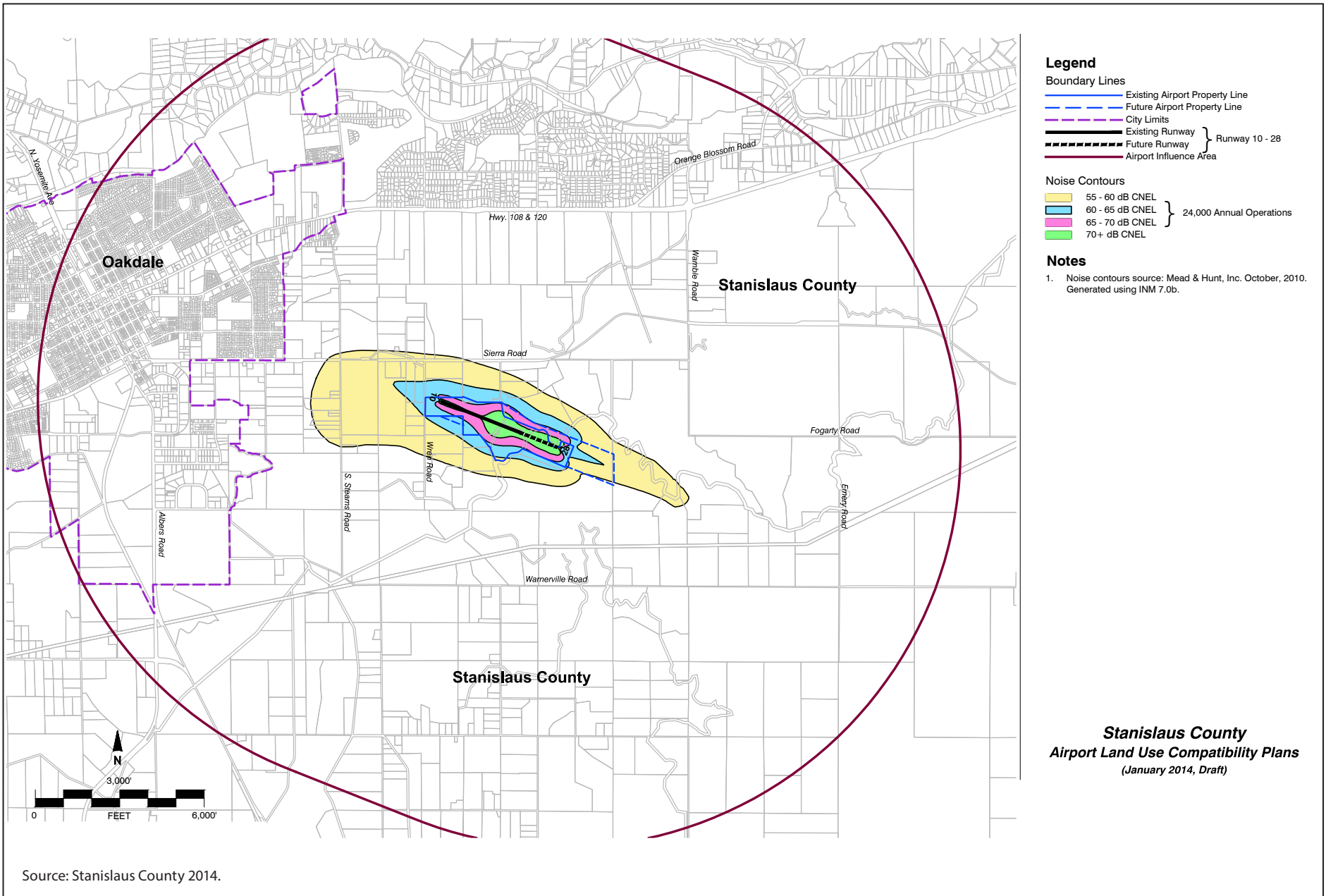
Figure 3.12-3
Predicted Year 2030 Traffic Noise Levels
(Ldn, 75 feet from Roadway Centerline)



Stanislaus County
Airport Land Use Compatibility Plans
 (January 2014, Draft)

Figure 3.12-4
Airport Noise Zones Policy Map—
Modesto City-County Airport





Graphics ... 00203.10 (3-5-2015).tm



Figure 3.12-5
Airport Noise Zones Policy Map—
Oakdale Municipal Airport

3.13 Population and Housing

3.13.1 Introduction

This section discusses the impacts of the plan updates with respect to population and housing. It lists the thresholds of significance that form the basis of the environmental analysis, describes the study area, provides environmental setting information that is relevant to population and housing, and assesses whether the plan updates would result in significant impacts.

Study Area

The population and housing impact study area for the project is defined as Stanislaus County.

3.13.2 Environmental Setting

This section describes the state, regional, and local regulations and policies that are applicable to the plan updates, and the existing conditions pertaining to population and housing in the study area. The existing conditions constitute the baseline for this environmental analysis.

Regulatory Setting

This section describes the state and local regulations related to population and housing that would apply to the plan updates. Increasing population requires new jobs and housing to support it. State legislation passed throughout the last decade encourages jurisdictions to weave jobs, housing, infrastructure, public services, transportation, natural resource management, and health issues together into unified strategies. This type of comprehensive and coordinated planning requires a regional approach and increased cooperation between the cities and counties in efforts to find solutions to regional problems.

State

Housing Element Law

California Planning Law requires each county (and city) to adopt a housing element as part of its general plan (Government Code Sections 65580-65590). As Government Code Section 65583 explains:

The housing element shall consist of an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, financial resources, and scheduled programs for the preservation, improvement, and development of housing. The housing element shall identify adequate sites for housing, including rental housing, factory-built housing, mobile homes, and emergency shelters, and shall make adequate provision for the existing and projected needs of all economic segments of the community.

The California Department of Housing and Community Development (HCD) is responsible for assigning quantified regional housing shares to the various councils of government for allocation to the individual cities and counties within their region. HCD is also responsible for reviewing and certifying the adequacy of the housing elements adopted by the cities and counties. The Stanislaus Council of Governments (StanCOG) is responsible for determining the regional housing needs of the

individual cities in Stanislaus County through the Regional Housing Needs Allocation (RHNA) process. Unlike other elements of a general plan, the housing element must be updated on a regular schedule. Beginning with the upcoming housing element cycle, the local governments in Stanislaus County will be required to update their housing elements every eight years.

Senate Bill 375

Senate Bill (SB) 375, enacted in 2008, links regional transportation plans (RTPs) to policies for reducing greenhouse gas (GHG) emissions and providing housing within the region. RTPs are adopted for purposes of identifying and prioritizing funding for regional transportation improvements. SB 375 requires Metropolitan Planning Organizations (MPOs) such as StanCOG to include a “sustainable communities strategy” (SCS) in their RTPs and details regarding the contents of that strategy. The purpose of the SCS is to establish policies and transportation funding to reduce GHG emissions from automobiles and light trucks in their region.

Under SB 375, StanCOG is responsible for linking the quantified housing objectives to the land use strategy of the RTP/SCS through the RHNA process. These numbers will be the underlying focus of the 2015–2023 housing element to be prepared by the local governments, including Stanislaus County.

Disadvantaged Unincorporated Communities

SB 244 of 2011 requires cities and counties to assess the infrastructure needs of disadvantaged unincorporated communities in city and county general plans. Local Agency Formation Commissions (LAFCOs) must consider the needs of disadvantaged unincorporated communities in Municipal Service Reviews (MSRs) and annexation decisions. The requirements of what constitutes a “disadvantaged community” are as follows:

- Contains 10 or more dwelling units in proximity to one another.
- Is within a city sphere of influence or an island within a city boundary or is geographically isolated but has existed for more than 50 years.
- Has a median income that is 80% or less than the statewide median income (San Joaquin Valley n.d.).

Under Government Code Section 65302.10, on or before the due date for the next adoption of its Housing Element, pursuant to Section 65588, the county is to review and update the Land Use Element of its general plan to include all of the following:

- An identification of each legacy community within the boundaries of the county but not 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.
- For each identified community, an analysis of water, wastewater, stormwater drainage, and structural fire protection needs or deficiencies.
- An analysis, based on then-existing available data, of benefit assessment districts or other financing alternatives that could make the extension of services to identified communities financially feasible.

Stanislaus County has completed and is in the process of adopting the required disadvantaged unincorporated communities report. There are seven disadvantaged unincorporated communities

that qualify for consideration in the report: Cowan Tract, Crows Landing, Grayson, Keyes, Monterey Park Tract, Riverdale Park Tract, and Westley. The general plan update includes a number of new policies that will encourage providing services to underserved communities.

Regional

Regional Transportation Plan/Sustainable Communities Strategy

StanCOG prepared the RTP/SCS for the Stanislaus County region and adopted it in June 2014. The RTP/SCS represents an approach to transportation planning that strengthens the link between land use and transportation planning and contains a strategy to accommodate significant expected growth in the region (Stanislaus Council of Governments 2014a).

The RTP/SCS addresses SB 375 and federal mandates under MAP-21. As noted above, SB 375 calls for reductions in GHG emissions from automobiles and light trucks. MAP-21 emphasizes a performance-based planning approach. The RTP/SCS matches transportation investment priorities with desired land use. The RTP/SCS itself does not control land use within the county or exert power over county land use decisions but, rather, is a steering document for StanCOG's vision for a cohesive, sustainable region with multimodal transportation options that are available for all (Stanislaus Council of Governments 2014a).

RHNA and the Housing Element

HCD assigned a numerical share of the projected statewide housing needs to StanCOG, which StanCOG then divided among the cities and county. The county's current 2009–2014 Housing Element accommodates the 5,568 dwelling units assigned to the county by StanCOG.

HCD has assigned the regional housing need for the next revision of the Housing Element; StanCOG released the quantified RHNA in mid-2014. As shown in Table 3.13-1, the allocation for Stanislaus County's 2014-2023 Housing Element update is 2,241 dwelling units (Stanislaus Council of Governments 2014b).

Table 3.13-1. StanCOG Regional Housing Need Allocation for 2014–2023

Income Level	Unincorporated Stanislaus County Need	Full Stanislaus County Need
Very Low	538	5,225
Low	345	3,350
Moderate	391	3,670
Subtotal of Affordable Units	1,274	12,245
Above Moderate	967	9,085
Total	2,241	21,330

Source: Stanislaus Council of Governments 2014b. Draft Regional Housing Needs Plan for Stanislaus County: 2014–2023. Adopted January 2014.

Local

County Housing Element

Stanislaus County adopted its current Housing Element in August of 2012. It was duly certified as being adequate by HCD in September of 2012. The county is required to adopt the 2015–2023 update to the Housing Element by December 31, 2015. That amendment will be considered separately from the general plan update and will include the county’s RHNA responsibility.

County Measure E

Stanislaus County’s voters passed Measure E in November 2007. Under Measure E, land that is designated as agricultural or open space in the Land Use Element cannot be amended to residential or rezoned to residential without the approval of a majority of county voters. Because Measure E amended the County General Plan, it affects unincorporated lands that are under the county’s jurisdiction. Under California law, a general plan amendment that is adopted by voter-approved initiative can be changed only by approval of another initiative.

Measure E is intended to direct residential growth into the incorporated cities, which are more capable of serving these uses, and limit the potential for residential growth to convert agricultural land within the unincorporated areas. Its immediate effect is to restrict future residential developments within the unincorporated county to those areas that are currently designated and zoned for residential development (e.g., Salida and Diablo Grande). Measure E will remain in effect until December 31, 2036, unless it is otherwise amended by a future initiative (Stanislaus Council of Governments 2007).

Existing Conditions

Stanislaus County is located in the San Joaquin Valley, in the heart of California’s Central Valley. The county is bordered by the California Coastal Ranges to the west and the Sierra Nevada to the east. It spans nearly 1,500 square miles and has approximately 514,000 residents (2010 census) in its nine cities and unincorporated communities. Two of California’s major north/south routes, Interstate 5 and State Route 99, traverse the county, connecting it to employment centers in the San Francisco Bay Area, Stockton, and Sacramento.

In part because of its proximity to the Bay Area and relative lower cost of living, Stanislaus County is an agricultural county in transition. Prior to 1960, most of the county’s population lived on farms; today, the population of the nine incorporated cities is nearly three times that of the unincorporated area of the county. Much of this change is the result of population and economic growth in the Bay Area, which has created employment opportunities within commuting distance of the county’s largest cities. Unprecedented population growth throughout the 1990s increased pressure to convert productive agricultural lands to non-agricultural uses. As a response to this rapid growth, voters passed the 30-Year Land Use Restriction Initiative (Measure E) in 2008, which requires any redesignation or rezoning of land in the unincorporated area from agricultural or open space use to a residential use to be approved by a majority vote of the county voters at a general or special local election.

According to 2000 and 2010 census data, the county’s population increased by 15.1% between 2000 and 2010; however, between 2010 and 2013, the county’s trend toward growth had slowed to 1.8% county-wide (California Department of Finance 2013). As indicated in Table 3.13-2, most of

Stanislaus County's population increase in the 2000s occurred in the nine incorporated cities rather than the unincorporated area of the county. Between 2000 and 2010, the incorporated population increased by 18.8%, whereas the population of unincorporated Stanislaus County increased by only 3.2%. The county's unincorporated area and the city of Modesto have the largest populations and share the slowest growth rates (Table 3.13-2).

Table 3.13-2. Population Distribution for Stanislaus County, 2000 to 2010

Jurisdiction	2000	2010	Percentage Change
Modesto	188,856	201,165	6.5%
Turlock	55,810	68,549	22.8%
Ceres	34,609	45,417	31.2%
Riverbank	15,826	22,678	43.3%
Oakdale	15,503	20,675	33.4%
Patterson	11,606	20,413	75.9%
Newman	7,093	10,224	44.1%
Waterford	6,924	8,456	22.1%
Hughson	3,980	6,640	66.8%
Incorporated	340,207	404,217	18.8%
Unincorporated	106,790	110,236	3.2%
Stanislaus County Total	446,997	514,453	15.1%
San Joaquin County	563,598	685,306	21.6%
Merced County	210,554	255,793	21.5%
California	33,871,648	37,253,956	10.0%

Source: Stanislaus Council of Governments 2014a. Regional Transportation Plan/Sustainable Communities Strategy. Draft.

The slower growth rate in the unincorporated area of Stanislaus County is attributable to land use policy that directs growth to areas with the services necessary for urban development and the annexation of unincorporated lands into the cities as a precursor to development.

The LAFCO records show that the county's cities annexed more than 12,111 acres of previously unincorporated land between 2002 and 2012. As of 2014, the cities encompassed a total of 61,319 acres within their limits and an additional 86,974 acres within their spheres of influence. The spheres of influence encompass unincorporated lands that adjoin the cities and reflect their probable future physical boundaries and service areas. Land must be within a city's sphere of influence if it is to be annexed to the city. County land use policies and agreements with the cities regarding development within the spheres of influence contributed to the slower growth rate in the unincorporated area by requiring city concurrence in discretionary urban development occurring within the spheres.

Planning strategies of the Stanislaus County General Plan must reflect the requirements of Measure E, as discussed below. Although the community plans for Keyes and Denair identify additional residential capacity, the future development of these communities is restricted by Measure E's limit on rezoning. The only unincorporated communities with any substantial capacity for residential growth that are not subject to Measure E are Diablo Grande and Salida.

Stanislaus County does have some existing residential communities outside of city limits. The 2014 general plan update provides for comprehensive planning, with a focus on redevelopment¹ and infill of existing communities while protecting the county's agricultural resources.

Although most likely slower than the population boom the county experienced throughout the 1990s and 2000s, continued development and increased population growth is anticipated. StanCOG projects that the population of Stanislaus County will reach 721,582 by 2035, an increase of approximately 170,000 residents from the estimated 2015 population (Stanislaus Council of Governments 2013) About 11% of that growth is projected to occur in the unincorporated area (see Table 3.13-3).

Table 3.13-3. Regional Population Forecast (by local jurisdiction)

City	2010	2015	2020	2025	2030	2035	Change
Ceres	45,417	50,069	55,379	60,689	65,999	70,127	54.4%
Hughson	6,640	7,012	7,437	7,862	8,287	8,805	32.6%
Modesto	201,165	211,813	223,966	236,119	248,272	263,802	31.1%
Newman	10,224	11,648	13,274	14,900	16,525	17,559	71.7%
Oakdale	20,675	22,908	25,457	28,005	30,555	32,466	57.0%
Patterson	20,413	25,065	30,375	35,685	40,995	43,559	113.4%
Riverbank	22,678	24,989	27,627	30,265	32,903	34,961	54.2%
Turlock	68,549	74,983	82,328	89,673	97,017	103,086	50.4%
Waterford	8,456	9,409	10,496	11,584	12,671	13,464	59.2%
Unincorporated	110,236	113,772	117,807	121,843	125,879	133,753	21.3%
Stanislaus County Total	514,453	551,668	594,146	636,625	679,103	721,582	40.3%
San Joaquin County	685,000	743,000	807,000	872,000	938,000	1,004,000	46.6%
Merced County	256,000	277,000	303,000	330,000	356,000	383,000	49.6%

Source: Stanislaus Council of Governments 2014a. 2040 Regional Growth Forecast.

The Population and Housing section will use 2010 as the baseline year for population. This is because there is no reasonably available population estimate for 2014, while there is U.S. Census Bureau information for 2010. In addition, the StanCOG population forecasts used throughout this EIR is founded on a 2010 base year.

3.13.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan updates; discusses the individual impacts relative to the thresholds of significance; discusses mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and indicates the overall significance of the impact with mitigation incorporated. The reasonably foreseeable impacts of the Stanislaus County General Plan update and the Airport Land Use Compatibility Plan (ALUCP) are compared to this baseline of existing (i.e., 2010) conditions.

¹ The term "redevelopment" is used to describe reinvestment in and improvement of a community. State law has eliminated all of the redevelopment agencies, so this term is not intended to describe the activities of those now-defunct agencies.

Major Sources Used in Analysis

The major sources used in this analysis are listed below:

- Stanislaus Council of Governments 2040 Regional Growth Forecast
- California Department of Finance Population Estimates
- Stanislaus County Land Use Designations

Approach and Methodology

As mentioned above, 2010 was used as the baseline year for population projections in the Population and Housing section. The reasonably foreseeable impacts of the Stanislaus County General Plan update and the ALUCP are compared to this baseline. For purposes of this analysis, the future population growth described in StanCOG's 2014 RTP/SCS is assumed to include future population growth in the unincorporated county.

The proposed updated general plan was qualitatively evaluated for the impact analysis section below by using county land use designations, maps, and information in other county documentation to determine how the project would affect existing conditions and future growth in the county.

Thresholds of Significance

Based on State CEQA Guidelines, Appendix G, the plan updates would have a significant impact with respect to population and housing if they would:

- Induce substantial population growth, either directly, by proposing new homes and businesses, or indirectly, through the extension of roads and other infrastructure.
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Impacts and Mitigation Measures

Impact POP-1: Induce substantial population growth, either directly, by proposing new homes and businesses, or indirectly, through the extension of roads and other infrastructure (less than significant)

The current Housing Element (adopted in 1992) had a major update in 2012. Therefore, the Housing Element is not proposed for change as part of the general plan update; it will be updated at a later date.

No direct impacts would occur as a result of the project because the project does not propose new homes and businesses. However, indirect impacts could occur through individual developments that are consistent with the general plan and the extension of roads and other infrastructure as the county becomes more built out as 2035 approaches. The Stanislaus County General Plan update would revise certain general plan policies but not substantially change planned locations of future developments.

Although the Housing Element is being updated through a separate process, the proposed project integrates population projections adopted by StanCOG that extend the planning horizon to 2035, per Government Code Section 65300. StanCOG's regional growth forecast predicts a population for the unincorporated county jurisdiction of 133,753 in 2035, which represents an increase of approximately 23,517 people, or approximately 21%, from its 2010 population (Stanislaus Council of Governments 2013). This is a yearly increase of approximately 0.8%.

The land use designations, described in the county's Land Use Element, provide a blueprint for future development in the county. Population growth in the unincorporated areas of Stanislaus County is likely to be concentrated in the Salida and Diablo Grande communities, according to general plan land use designations (Stanislaus County 1994). The Salida community is guided by a community plan and the Diablo Grande community is guided by a specific plan. They are served by special districts that provide the sewer and water systems necessary to accommodate development. Neither of these communities is subject to county Measure E's limit on residential general amendments or residential rezoning because they have been specifically designated to support residential growth. A major amendment to the Salida Community Plan was adopted by the Board of Supervisors in 2007 that will accommodate 5,000 new residential units in varying density ranges (Stanislaus County 2012). Diablo Grande currently has significant vacant and underutilized land, with a realistic development capacity of 292 additional units, taking into consideration infrastructure capacity (Stanislaus County 2012). However, a new fire station must be built before additional units may be developed in Diablo Grande. In addition, development cannot occur in the SCP designated zones until a comprehensive EIR is completed. Because development is likely to be concentrated in communities in unincorporated Stanislaus County that are zoned and designated to support growth, the general plan update would not induce substantial indirect population growth through the extension of roads and other infrastructure to support residential development.

Some of the proposed general plan policy changes would act to limit the project's potential to induce indirect population growth.

Circulation Element

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 vehicle circulation exist, or will exist as part of the development, to adequately handle increased traffic and safety concerns.

IMPLEMENTATION MEASURES

3. ~~Developers~~ Applicants will construct or pay the cost of new roads, including non-motorized elements, necessary to serve the development of all land uses and to mitigate impacts to the existing roads caused by the development.
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, ~~traffic~~ transportation impact fees, and other funding mechanisms. The total cost of required improvements shall be paid for by new development.
6. Applicants shall identify and mitigate, at the sole cost of the applicant, all potential impacts to the transportation system from new development that adversely impact the operations and safety of the circulation system.
- ~~7.~~ 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 applicant, 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.~~

These measures are unlikely to increase the rate of development and induce indirect population growth because they would create greater financial responsibility for developers.

Conservation Element

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

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.
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.~~

Removing language that encourages the clustering of dwelling units (Implementation Measure 4) supports the general plan's overarching goal of encouraging development in incorporated cities. This policy would not influence indirect population growth due to the extension of roads or infrastructure because the removal of this language would discourage development in areas that would require the extension of roads and other infrastructure.

Safety Element

GOAL ONE. Prevent loss of life and reduce property damage as a result of natural disasters.

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.

IMPLEMENTATION MEASURES

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).

Although new development would be subject to any zoning ordinance amendment, the amendment of Policy Two would be unlikely to induce substantial indirect population growth due to extension of roads or infrastructure because of development limitations in areas that are prone to flooding.

ALUCP Update

The ALUCP update would also not induce substantial population growth in unincorporated Stanislaus County. The proposed policy changes would include noise contours, new safety zones, and overflight policies. As discussed below, in Impact POP-2 and Impact POP-3, the expansion of Airport Influence Areas could affect future development in those areas because of development restrictions, but revised ALUCP policies would not extend roads or infrastructure. Therefore, the

updated ALUCP is not likely to influence substantial indirect population growth, resulting in a less-than-significant impact.

Significance without Mitigation: Less than significant (no mitigation required)

Impact POP-2: Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere (less than significant)

The general plan does not contain policies that would result in the displacement of substantial amounts of housing. To the contrary, the purpose of the Housing Element is to ensure that housing is available to meet the county's share of the regional housing needs of all income levels. The general plan update would not alter any such policies. Additionally, there are no development projects proposed by the project that could displace housing.

Federal Emergency Management Agency (FEMA) Best Available Maps (BAM) show that there are 100- and 200-year floodplains within the county (Federal Emergency Management Agency 2014). Approval of site plans is prohibited where projects could be subject to flooding in a 200-year flood event, per SB-5 regulations. However, the potential loss of future development potential would most likely be minor because the floodplains would not affect areas that would be subject to the greatest amount of projected development, the Salida and Diablo Grande communities. Additionally, the BAM analyzed in conjunction with general plan land use maps show that most of the small communities in the county are outside of both the 100- and 200-year floodplains. Therefore, the loss of future development potential would not be significant.

ALUCP Update

The ALUCP identifies one 2.4 acre parcel near the Modesto Airport as being within Zone 2. Within this zone, the ALUCP would allow 1 dwelling unit per 10-acre parcel. Because the parcel is designated for medium to high density residential development, this would be a potential conflict. An analysis of residential displacement was conducted for the County as part of the ALUCP update, and aerial photographs identify this parcel as previously developed, but currently vacant. Because the ALUCP would not require the removal of existing development, no actual displacement would occur.

The ALUCP update would not displace any existing housing. However, it would affect the potential for future development. Unincorporated areas in Modesto adjacent to Modesto Airport are designated Low-Density Residential. The ALUCP would establish an expanded Airport Influence Area adjacent to Modesto Airport that would expand its influence and therefore affect more homes than the current ALUCP. However, although the expanded Airport Influence Area could limit future development because of the need for approval from the Airport Land Use Commission prior to approval, it would not require existing homes to be relocated. Therefore, the impact would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact POP-3: Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere (less than significant)

Because the general plan update would not result in the displacement of existing housing, it would not displace substantial numbers of people. The general plan, as amended by the project, does not include any actions that could lead to the displacement of substantial numbers of people.

Similar to Impact POP-2, the ALUCP update would not displace substantial numbers of people. The proposed expansion of Modesto Airport's Airport Influence Area could affect future development but would not displace current residents. Because the project would not displace substantial numbers of people, the impact would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

3.13.4 References Cited

Printed References

- California Department of Finance. 2013. E-6. *Population Estimates and Components of Change by County—July 1, 2010–2013*. Sacramento, CA.
- Federal Emergency Management Agency. 2014. *Best Available Maps*. Available: <http://gis.bam.water.ca.gov/bam/>. Accessed: December 18, 2014.
- Stanislaus Council of Governments. 2013. *January 16, 2013 Board Meeting Agenda, Attachment 8B*. Modesto, California. Available: <http://www.stancog.org/pdf/policy-board/agendas/2013/pb-agenda-01-16-2013.pdf>. Accessed: December 15, 2014.
- . 2014a. *Regional Transportation Plan/Sustainable Communities Strategy*. Stanislaus County, California. Prepared by Stanislaus Council of Governments. Available: <http://www.stancog.org/pdf/rtp/final-2014-rtpscs.pdf>. Accessed: December 8, 2014.
- . 2014b. *Regional Housing Needs Allocation (RHNA)*. Last revised: N/A. Available: <http://www.stancog.org/rhna.shtm>. Accessed: December 8, 2014.
- Stanislaus County. 1994. *General Plan Designations*. Modesto, California. Accessed: December 18, 2014.
- . 2007. *Full Text of Measure E: Thirty (30) Year Land Use Restriction Initiative*. Stanislaus County, California. Prepared by Stanislaus County. Available: <http://www.farmland.org/programs/states/CA/documents/measure-e-english.pdf>. Accessed: December 2, 2014.
- . 2012. *Housing Element*. Prepared for Stanislaus County. Available at: <http://www.stancounty.com/planning/pl/gp/housing-element.pdf>. Accessed on December 18, 2014.

3.14 Public Services

3.14.1 Introduction

This section discusses the impacts of the plan updates with respect to public services. It lists the thresholds of significance that form the basis of the environmental analysis, describes the public services study area and major sources used in the analysis, provides environmental setting information that is relevant to public services, and assesses whether the plan updates would result significant impacts with respect to public services.

Study Area

The public services impact study area for the project is defined as Stanislaus County.

3.14.2 Environmental Setting

This section describes the state, regional, and local regulations and policies that are applicable to the plan updates and the existing conditions pertaining to public services in the study area. The existing conditions constitute the baseline for analysis.

Regulatory Setting

This section describes the state, regional, and local regulations related to public services that would apply to the plan updates. There are no applicable federal regulations.

State

Senate Bill 50

Senate Bill 50 (“SB 50,” also known as Proposition 1A, codified in California Government Code Section 65995 et seq.) was enacted in 1998 to address how schools are financed and how development projects may be assessed for associated school impacts (California State Senate 1998). SB 50 sets forth the “exclusive methods of considering and mitigating impacts on school facilities” resulting from any state or local planning and/or development project, regardless of whether its character is legislative, adjudicative, or both (Government Code Section 65996[a]). Section 65995 provides that “[t]he payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995...is hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization...on the provision of adequate school facilities” (Government Code Section 65995[h]). The reference in Section 65995(h) to fees “imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995” is a reference to per-square-foot school fees that can be imposed by school districts on new residential or commercial/industrial construction at three levels. Education Code Section 17620 provides the basic authority for school districts to levy fees against construction for purposes of funding construction or reconstruction of school facilities, subject to limits set forth in Government Code Section 65995.

California State Fire Code

By state law, the State Fire Marshal (SFM) is responsible for coordination of the state's fire and life safety codes. The SFM must review the proposed regulations of state agencies that promote fire and life safety before the regulations can be submitted for approval. The SFM Code Development and Analysis Program staff regularly reviews Title 19 of the California Code of Regulations (CCR), Public Safety, which discusses fire safety standards, for relevancy, necessity, conflict, duplication, and overlap. The staff also implements legislative mandates to develop regulations related to fire and life safety, particularly the various occupancy classifications, under the authority of the SFM. This encompasses the administrative processing of regulations from concept to promulgation in the CCR (California Building Standards Commission 2013a).

California Code of Regulations Title 24

Part 2 of Title 24 of the CCR refers to the California Building Code, which contains complete regulations and general construction building standards of state adopting agencies, including administrative, fire and life safety, and field inspection provisions. Part 2 was updated in 2008 to reflect changes in the base document from the Uniform Building Code to the International Building Code. Part 9 refers to the California Fire Code, which contains fire safety-related building standards referenced in other parts of Title 24 (California Building Standards Commission 2013b). This is codified in the Stanislaus County Code under Title 16.

California Health and Safety Code (Section 13000 et seq.)

State fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code. This includes regulations concerning building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and child care facility standards, and fire suppression training. The SFM enforces these regulations and building standards in all state-owned buildings, state-occupied buildings, and state institutions throughout California (State of California 2012).

California Public Resources Code Sections 4201–4204

This section of the Public Resources Code (PRC) was amended in 1982 to require the California Department of Forestry and Fire Protection (CAL FIRE) to classify Fire Hazard Severity Zones within State Responsibility Areas (SRAs). Specifically, the purpose of this code is to classify lands within SRAs in accordance with the severity of fire hazard present for the purpose of identifying measures to be used to retard the rate of spreading and reduce the potential intensity of uncontrolled fires that threaten to destroy resources, life, or property (California Department of Forestry and Fire Protection 2012).

Senate Bill 1241

This bill revises the safety element requirements for SRAs and very high fire hazard severity zones to require the safety element to be reviewed and updated as necessary to address the risk of fire in these zones, taking into account specified considerations, including the most recent version of the OPR's "Fire Hazard Planning" document.

Regional

Stanislaus Council of Governments – 2014 Regional Transportation Plan/Sustainable Communities Strategy

The 2014 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) presents a strategy to accommodate the significant expected growth in the region while promoting economic vitality, providing more housing and transportation choices, promoting healthy living, and improving communities through an efficient and well-maintained transportation network. The land use pattern identified in the RTP/SCS is not binding on the county or its cities. However, the RTP/SCS is related to the Stanislaus Council of Governments (StanCOG) Regional Housing Needs Allocation, which is reflected in the general plan Housing Element. The county has integrated the RTP/SCS regional growth forecast into the proposed general plan update.

Local

Stanislaus County General Plan

The general plan is a comprehensive, long-range declaration of purposes, policies, and programs for development in Stanislaus County. Stanislaus County has adopted Community Plans for most of the unincorporated towns in the county. These plans outline future growth patterns in the towns. Each plan is used in conjunction with the general plan to indicate whether the Urban Transition area will be residential, commercial, industrial, etc. Community Plan areas include Crows Landing, Del Rio, Denair, Hickman, Keyes, Knight's Ferry, La Grange, Salida, and Westley.

The actual level of future residential development within the adopted Community Plans is limited by county Measure E. This initiative measure requires a popular vote prior to any general plan amendment or rezoning of designated agricultural or open space that would allow residential development.

The following are the pertinent goals and policies of the existing Stanislaus County General Plan, by element.

Land Use Element

Section 65302a of the California Government Code requires the county to adopt a Land Use Element that describes the general distribution as well as the general location and extent of land uses (e.g., housing; business; industry; open space, including areas for agriculture, natural resources, recreation, and enjoyment of scenic beauty; education; public buildings and grounds; solid and liquid waste disposal facilities; and other categories of public and private land uses).

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY FIVE. Residential densities as defined in the General Plan shall be the maximum based upon environmental constraints, the availability of public services, and acceptable service levels. The densities reflected may not always be achievable and shall not be approved unless there is proper site planning and provision of suitable open space and recreational areas consistent with the supportive goals and policies of the General Plan.

GOAL FOUR. Ensure that an effective level of public service is provided in unincorporated areas.

POLICY TWENTY-ONE. At least three net acres of developed neighborhood parks, or the maximum number of acres allowed by law, should be provided for every 1,000 residents, through land dedication and development, payment of in-lieu-of fees, or other methods acceptable to the Parks Department.

POLICY TWENTY-TWO. 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.

IMPLEMENTATION MEASURES

1. The County shall continue to implement its Public Facilities Fees Program, which is intended to help finance public facilities needed to maintain current levels of service.
4. The County shall continue to work with independent fire districts to implement fees to help finance public facilities to support their services.
5. The current level of service of public agencies shall be determined and not allowed to deteriorate as a result of new development.
8. Only development requests which have recognized and reasonably mitigated significant impacts on school facilities shall be approved.

Circulation Element

The Circulation Element of the general plan identifies goals, policies, and implementation measures that ensure compatibility with respect to land use, infrastructure, and transportation modes.

GOAL ONE. Provide a system of roads throughout the County that meets land use needs.

POLICY TWO. Circulation systems shall be designed and maintained to promote safety and minimize traffic congestion.

IMPLEMENTATION MEASURE

8. Private roads 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.

Conservation/Open Space Element

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 that is essentially unimproved).

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

POLICY TWELVE. Provide a system of local and regional parks that will serve the residents of the County.

IMPLEMENTATION MEASURES

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.

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 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.
2. In case of a disaster, the County will use the adopted emergency plan and the procedures established in that document.

Safety Element

GOAL ONE. Prevent loss of life and reduce property damage as a result of natural disasters.

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 MEASURE

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.

POLICY SEVEN. Adequate fire and sheriff protection shall be provided.

IMPLEMENTATION MEASURES

1. The County shall continue to implement the funding strategies identified under Policy Twenty-Two of the Land Use Element.
2. All discretionary projects in the County shall be referred to the Fire Safety Department and to the appropriate fire district 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.
3. The County Fire Safety Department shall work with the California Department of Forestry and Fire Protection and with local fire districts to minimize the danger from wildfire.
4. Discretionary projects outside of fire districts shall be considered for approval only when they are found to include adequate fire protection.
5. New development, other than agricultural, shall have adequate water to meet the established fire flow standards.
6. All discretionary projects shall be referred to the Sheriff's Department for comment. Comments from the Sheriff will be used to either condition or modify the project.
7. All building permits and discretionary projects within the State Responsibility Areas, as identified by the California Department of Forestry and Fire Protection, shall meet the minimum 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, or more stringent specific standards as may be adopted by the Board of Supervisors for this County.
8. All discretionary projects shall be referred to the Regional Emergency Medical Services Office for comments related to ambulance service.

POLICY EIGHT. Roads shall be maintained for the safety of travelers.

POLICY NINE. The County shall support the formation of improvement districts (including flood control districts) to eliminate safety hazards.

IMPLEMENTATION MEASURES

1. Fire Districts, Sheriff's Department, etc., should be encouraged to request that the Board of Supervisors impose development fees to help support their services. Such requests shall be accompanied by supporting documentation.
2. The County will work with the Fire Safety Department, State Department of Forestry and Fire Protection, and local fire districts 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.

POLICY THIRTEEN. The Department of Environmental Resources shall continue to coordinate efforts to identify the locations of hazardous materials and prepare and implement plans for the management of spilled hazardous materials, as required.

POLICY FOURTEEN. The County will continue to enforce state-mandated structural health and safety codes, including but not limited to the Uniform Building Code, the Uniform Housing Code, the Uniform Fire Code, the Uniform Plumbing Code, the National Electric Code, and Title 24.

Stanislaus County Code, Title 23

To implement the goals and objectives of the County General Plan and mitigate impacts caused by new development within the county, the county collects public facilities impact fees from new development. The fees finance public capital facilities and ensure that new development pays its fair share for these improvements (Stanislaus County 2014a).

Stanislaus County Code, Title 24

To safeguard the public from the peril of fire, implement the goals and objectives of the County General Plan, and mitigate impacts caused by new development within the county, the county collects fire protection facilities impact fees. These fees, which are used to finance fire protection facilities and vehicles, ensure that new development pays its fair share for these improvements. Fees enacted pursuant to this title are to be paid to the fire protection district before the issuance of building permits (Stanislaus County 2014a).

Stanislaus County Public Facilities Fee Program

The Public Facilities Fee program imposes a fee on new development per the state Mitigation Fee Act (Government Code Section 66000 et seq.). Revenues from this "impact fee," fund the pro-rata extension of existing County capital facilities to support the new growth created by the development. The use of this fee is limited to capital improvements or facilities, and cannot be for operations (i.e., salaries). The fee reflects the projected cost of needed facilities, as shared by individual new developments. It does not replace, repair or maintain the existing level-of-service provided by the County.

Fees collected under this program pay for capital improvements related to emergency services, libraries, and police protection (county sheriff), among other things. The fees are adjusted on a regular basis to account for changes in cost or in development forecasts.

Stanislaus County Parks Master Plan

The Stanislaus County Parks Master Plan provides a comprehensive overview that is used to guide the County Board of Supervisors, Parks and Recreation Commission, and Department of Parks and Recreation as they work to meet a variety of goals for parks and park users. Development of this

long-range plan included a needs assessment, specific park plans, future planning, development of design standards, and economic and fiscal planning (Stanislaus County 1994).

Stanislaus County does not have a parks fee, nor does it have a “Quimby Act” provision in its Subdivision Ordinance that would allow for the collection of a fee or dedication of land for park and recreational facilities.

Stanislaus County Multi-Jurisdictional Hazard Mitigation Plan

The Stanislaus County Board of Supervisors adopted the Stanislaus County Multi-Jurisdictional Hazard Mitigation Plan on May 24, 2011. This document is in the process of being updated. The county and 58 other jurisdictions participated in updating the plan. Each of the 58 participating jurisdictions uses the Multi-Jurisdictional Hazard Mitigation Plan, along with its individual plan, as its own Local Hazard Mitigation Plan. The county's plan serves as an 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 (Stanislaus County 2014b).

Existing Conditions

Fire Protection

The fire services system in Stanislaus County is a mix of municipal agencies, fire protection districts, and various forms of state fire protection. The Stanislaus County Office of Emergency Services and Office of the Fire Warden are divisions of the Chief Executive Office. Independently, the former is responsible for developing and maintaining general and specific preparedness programs for the county and its nine cities while the latter supports and coordinates all public fire services and agencies in the County, with an emphasis on special fire districts (Stanislaus County 2014b). Under the direction of the Fire Warden, the Fire Prevention Bureau provides a wide range of fire prevention services to the unincorporated areas of Stanislaus County, including the unincorporated communities of Crows Landing, Denair, Grayson, Hughson, Newman, Salida, and Westley. There are six municipal fire departments in the county, which are funded through general fund revenues. In addition, there are 14 special districts that provide fire protection services. A complete list of the fire protection agencies throughout Stanislaus County is shown in Table 3.14-1.

Table 3.14-1. Stanislaus County Fire Departments

Facility Name	Address
Burbank-Paradise Fire District	1313 Beverly Drive Modesto, CA 95351
Ceres Fire Protection District	2755 Third Street Ceres, CA 95307
Ceres Emergency Services ^a	2755 Third Street Ceres, CA 95307
Denair Fire District	P.O. Box 262 Denair, CA 95316
Hughson Fire Protection District	P.O. Box 37 Hughson, CA 95326
Industrial Fire Protection District	N/A
Keyes Fire Protection District	P.O. Box 577 Keyes, CA 95328
Modesto Fire Department ^a	610 Eleventh Street Modesto, CA 95354
Mountain View Fire Protection District	9633 Crows Landing Road Crows Landing, CA 95313
Newman Fire Department ^a	1035 Yolo Newman, CA 95360
Oakdale City Fire Department ^a	3324 Topeka Street Riverbank, CA 95367
Oakdale Rural Fire Protection District	3324 Topeka Street Riverbank, CA 95367
Patterson Fire Department	344 W. Las Palmas Avenue Patterson CA 95363
Salida Fire Protection District	P.O. Box 1335 Salida, CA 95368
Stanislaus Consolidated Fire Protection District	3324 Topeka Street Riverbank, CA 95367
Turlock City Fire Department ^a	P.O. Box 819006 Turlock, CA 95381
Turlock Rural Fire Protection District	690 W. Canal Drive Turlock, CA 95380
Westport Fire Protection District	5160 S. Carpenter Road Modesto, CA 95358
West Stanislaus Fire Protection District	P.O. Box 565 Patterson, CA 95363
Woodland Fire Protection District	3300 Woodland Avenue Modesto, CA 95358

Source: Stanislaus Consolidated Fire Protection District 2014a.

^a Municipal fire department.

The Office of the Fire Warden places an emphasis on support and coordination with special fire districts. The Stanislaus Consolidated Fire Protection District (SCFPD) is the largest agency with responsibility for the provision of fire protection, prevention, and emergency services in unincorporated Stanislaus County. The district, with its 69 career employees, approximately 10 volunteers, and eleven fire stations, has an annual operating budget of \$13 million (Stanislaus Consolidated Fire Protection District 2014). The district handled more than 7,000 calls last year, ranging from medical aid to structural fires, hazardous materials responses, wildland fires, and miscellaneous calls (e.g., car fires, trash fires). In addition, the district has areas of state responsibility and works closely with CAL FIRE (Stanislaus Consolidated Fire Protection District 2014). It serves approximately 550 square miles of unincorporated area in the county, including the cities of Waterford, Oakdale, and Riverbank and the communities of Empire, Hickman, and La Grange, Knights Ferry, and Valley Home (Stanislaus Consolidated Fire Protection District 2014). A list of the names and locations of the SCFPD fire stations is provided in Table 3.14-2 below.

Table 3.14-2. Stanislaus Consolidated Fire Protection District Facilities

Facility Name	Address
Station 30 (Administrative Headquarters)	3324 Topeka Street Riverbank, CA 95367
Station 31	461 Mitchell Road Modesto, CA 95354
Station 32	4845 Yosemite Boulevard Modesto, CA 95354
Station 33	7737 Yosemite Boulevard Modesto, CA 95357
Station 34	321 E Street Waterford, CA 95386
Station 35	30198 Main Street La Grange, CA 95329
Station 36	3328 Topeka Street Riverbank, CA 95367
Station 1, Oakdale	1398 East F Street Oakdale, CA 95361
Station 2, Oakdale	13199 Valley Home Road Valley Home, CA 95361
Station 3, Oakdale	17700 Sonora Road Knights Ferry, CA 95361
Station 4, Oakdale	450 South Willowood Avenue Oakdale, CA 95361
Station 5, Oakdale	325 East G Street Oakdale, CA 95361

Source: Stanislaus Consolidated Fire Protection District 2014a.

CAL FIRE provides service within SRAs, predominantly wildland and open space areas within the county. It is also part of countywide mutual aid, with specific automatic aid agreements (Stanislaus Local Agency Formation Commission 2007).

Police Protection

The Stanislaus County Sheriff's Department (SCSD) is charged with law enforcement duties in Stanislaus County. Its Operations Division has principal jurisdiction in all unincorporated areas, covering an area of approximately 1,521 square miles with a population of more than 200,000 (Stanislaus County Sheriff's Department 2014). Of the nine cities in the county, SCSD provides law enforcement services to four contract cities: Patterson, Riverbank, Hughson, and Waterford. The cities of Ceres, Modesto, Newman, Oakdale, and Turlock maintain their own police departments. The Operations Division is divided into two units, Patrol and Investigations. Patrol Services is responsible for investigating crime, making arrests, providing preventative patrols, and rendering assistance or aid where necessary. The Investigations Unit follows up on cases that warrant further investigation (i.e., beyond that provided by patrol personnel).

Schools

The Stanislaus County Office of Education is responsible for supervising public school districts and schools in Stanislaus County. The County Office of Education supervises 26 districts located throughout Stanislaus County (see Table 3.14-3).

Table 3.14-3. Schools Districts in Stanislaus County

Facility Name	Address
Ceres Unified School District	2503 Lawrence Street Ceres, CA 95307
Chatom Union School District	7201 Clayton Road Turlock, CA 95380
Denair Unified School District	3460 Lester Road Denair, CA 95316
Empire Union School District	116 North McClure Road Modesto, CA 95323
Gratton School District	4500 South Gratton Road Denair, CA 95316
Hart-Ransom Union School District	3920 Shoemake Avenue Modesto, CA 95358
Hickman School District	13306 Fourth Street Hickman, CA 95323
Hughson Unified School District	6815 Hughson Avenue Hughson, CA 95326
Keyes Union School District	5680 Seventh Street Keyes, CA 95328
Knights Ferry School District	12726 Dent Street Knights Ferry, CA 95361
Modesto City Schools District	426 Locust Street Modesto, CA 95351

Facility Name	Address
Newman-Crows Landing Unified School District	1162 Main Street Newman, CA 95360
Oakdale Joint Unified School District	168 South Third Avenue Oakdale, CA 95361
Paradise Elementary School District	3361 California Avenue Modesto, CA 95358
Patterson Joint Unified School District	510 Keystone Boulevard Patterson, CA 95363
Riverbank Unified School District	6715 Seventh Street Riverbank, CA 95367
Roberts Ferry School District	101 Roberts Ferry Road Waterford, CA 95386
Salida Union School District	4801 Sisk Road Salida, CA 95368
Shiloh School District	6633 Paradise Road Modesto, CA 95358
Stanislaus County Office of Education	1100 H Street Modesto, CA 95354
Stanislaus Union School District	2410 Janna Avenue Modesto, CA 95350
Sylvan Union School District	605 Sylvan Avenue Modesto, CA 95350
Turlock Unified School District	1574 East Canal Drive Turlock, CA 95380
Valley Home Joint School District	13231 Pioneer Avenue Valley Home, CA 95361
Waterford Unified School District	219 North Reinway Avenue, Building 2 Waterford, CA 95386

Source: Stanislaus County Office of Education 2013a.

The largest of these school districts is Modesto City Schools, with 29,948 enrolled students. The smallest is Knights Ferry, with 85 enrolled students (Stanislaus County Office of Education 2013b). Total enrollment in the county (K through 12) is 106,126, with approximately 8,000 students at each grade level (Stanislaus County Office of Education 2013b). There are 98 elementary schools, 25 middle schools, 19 high schools, 22 continuation institutions, 24 charter schools, and one special education center, for a total of 189 educational facilities (Stanislaus County Office of Education 2013b). These facilities employ a classified staff of 5,273 (Stanislaus County Office of Education 2013b).

Parks

The Stanislaus County Department of Parks and Recreation is in charge of park and recreational facilities in unincorporated Stanislaus County. The existing system of county parks includes five regional parks, eight fishing access sites, and 11 neighborhood parks (Stanislaus County Department of Parks and Recreation 1994). In addition, various municipal agencies provide their own park and

recreational services throughout the county. A wide variety of recreational and community services are available in the county, including early childhood classes, special interest classes, workout classes, adult sports leagues and tournaments, recreation for people with special needs, senior recreation, and fine arts programs (see Section 3.15, *Recreation*, for more information on parks and recreational facilities).

Other Public Facilities

The Stanislaus County Library, funded through a dedicated portion of the sales tax, provides all county residents with access to 773,213 books, magazines, newspapers, audio books, videos, and DVDs (Stanislaus County Library 2013a). Several library facilities are maintained throughout the county (see Table 3.14-4).

Table 3.14-4. Library Facilities in Stanislaus County

Facility Name	Address
Modesto Public Library	1500 I Street Modesto, CA 95354
Ceres Public Library	2250 Magnolia Ceres, CA 95307
Denair Public Library	4801 Kersey Road Denair, CA 95316
Empire Public Library	18 South Abbie Street Empire, CA 95319
Hughson Public Library	2412 A Third Street Hughson, CA 95326
Keyes Public Library	4420 Maud Avenue Keyes, CA 95328
Newman Public Library	1305 Kern Street Newman, CA 95360
Oakdale Public Library	151 South First Avenue Oakdale, CA 95361
Patterson Public Library	46 North Salado Patterson, CA 95363
Riverbank Public Library	3442 Santa Fe Street Riverbank, CA 95367
Salida Public Library	4835 Sisk Road Salida, CA 95368
Turlock Public Library	550 Minaret Avenue Turlock, CA 95380
Waterford Public Library	324 E Street Waterford, CA 95386

Source: Stanislaus County Library 2013b.

Guidelines for determining minimum library space requirements are maintained by the American Planning Association (APA). An evaluation of building size and condition is necessary to determine whether each structure can provide the necessary services. The standards for building size are generally expressed in terms of square feet per capita. The Experience Formulas for Library Size and Costs used by the APA suggest minimum sizes that range from 0.3 square feet per capita for libraries that serve 50,000 people or more to 0.6 or 0.65 for those that serve 10,000 to 35,000 people (American Planning Association 1968). To the extent that funding is available, these formulas will guide the provision of new library service as the county population grows.

3.14.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan updates; discusses the individual impacts relative to the thresholds of significance; discusses mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and indicates the overall significance of the impact with mitigation incorporated.

Major Sources Used in Analysis

The major sources used in this analysis are listed below:

- Stanislaus County General Plan
- Stanislaus County Code
- County Office of Education
- Information from County Departments

Approach and Methodology

The project was evaluated to determine if fire, police, school, library, and park and recreational facilities are staffed and located so as to continue to serve the county's residents adequately and whether additional facilities may be needed. Potential impacts from the additional facilities were assessed through the significance criteria established for this project, which are based on the State CEQA Guidelines. For purposes of this analysis, the future population growth described in StanCOG's 2014 RTP/SCS is assumed to include future population growth in the unincorporated county.

Thresholds of Significance

Based on State CEQA Guidelines, Appendix G, the plan updates would have a significant impact with respect to public services if they would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services and facilities:
 - Fire protection
 - Police protection
 - Schools

- Parks
- Other public facilities

Impacts and Mitigation Measures

Impact SER-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives: Fire protection (less than significant)

The proposed project integrates population projections adopted by StanCOG that extend the planning horizon to 2035. StanCOG's regional growth forecast predicts a population for the unincorporated county jurisdiction of 133,753 in 2035, which represents an increase of approximately 21% from its 2010 population (Stanislaus Council of Governments 2014). There is a reasonable expectation that population and housing within the public services study area will increase. The population and housing increase projected under the proposed project would increase the demands on Stanislaus County fire protection and emergency services. The ALUCP does not direct or propose any new airport operations. Therefore, it would not result in any new demands resulting from expansion or other changes to operations.

To maintain or achieve acceptable staffing and response-time objectives for fire protection, it is reasonably foreseeable that new or expanded fire stations will be needed. These would have the potential to result in adverse environmental impacts. Stanislaus County Ordinance (i.e., Title 23 and Title 24) impact fees will finance new facilities associated with the demands of new development. The fees from Title 24 will be used to fund the purchase of fire station sites, the construction of new stations, and the purchase of certain pieces of capital equipment.

As new development occurs, fees will be collected to ensure adequate levels of service related to fire protection are maintained.

Land Use Element

Existing Goal Four, Policy Twenty-Four (renumbered from Twenty-Two, under Implementation Measure 5, of the Land Use Element, requires current levels of service of public agencies to be determined and not allowed to deteriorate as a result of new development. Similarly, existing Goal One, Policy Five of the general plan's Land Use Element ensures that residential development maximums will be based on environmental constraints, the availability of public services, and acceptable service levels (see *Regulatory Setting*).

Safety Element

GOAL TWO. Minimize the effects of hazardous conditions that might cause loss of life and property.

POLICY SEVEN. Adequate fire and sheriff protection shall be provided.

IMPLEMENTATION MEASURES

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. All projects in State Responsibility Areas or Very High Fire Hazard Severity Zone shall be routed to CALFire for comments.

8. All discretionary projects shall be referred to the ~~Regional Emergency Medical Services Office~~ Local Emergency Medical Services Agency for comments related to ambulance service.

The comments of these agencies will be used to condition or recommend modifications to the project related to fire safety and rescue issues. All projects in SRAs or Very High Fire Severity Zones will be routed to CALFire for comments.

The number, locations, physical sizes, equipment assignments, and designs of future fire stations are unknown. The same is true for expansions of existing stations. As a result, the potential environmental impacts of future stations cannot be known at this time. Typical fire station impacts include intermittent noise from the sirens on fire trucks and ambulances leaving the station on calls as well as temporary traffic interruptions while vehicles are leaving the station. Fire stations very seldom result in significant effects that require the preparation of an EIR (e.g., the State Clearinghouse, which receives CEQA documents from all public agencies in California, has received only one EIR for a fire station since December 2009), and any impacts can be mitigated below a level of significance. Mitigation, if necessary, would be site and project specific. Because site- and project-specific information is not available for future fire stations, mitigation measures cannot be developed at this time.

Future fire stations will be subject to CEQA analysis, except for the new station to be located in Diablo Grande, which has already undergone environmental review. No CEQA analysis is required if stations are located in a commercial or industrial zone. Potential impacts will be disclosed, and site- and project-specific mitigation measures will be developed at that time. Due to the infrequency of an EIR being required for a fire station, it can be reasonably assumed that these facilities do not result in unavoidable significant impacts. Therefore, this impact is expected to be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact SER-2: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives: Police protection (less than significant)

As mentioned, StanCOG's regional growth forecasts, adopted in the general plan updates, create a reasonable expectation that population and housing within the public services study area will increase. The construction of housing (i.e., single- and multi-family residences) and nonresidential uses, including commercial, retail, office, and business park uses; fire stations; schools; and open areas, would increase the demand for police protection services within the public services study area. The SCSD would provide general law enforcement for this area. Without additional staffing and facilities, the projected increase in population would decrease the existing level of service of the SCSD. The ALUCP does not direct or propose any new airport operations. Therefore, it would not result in any new demands.

The number, locations, physical sizes, equipment assignments, and designs of future sheriff's stations are unknown. The same is true for expansions of existing stations. As a result, the potential environmental impacts of future stations cannot be known at this time. Typical sheriff's station impacts include minor traffic generation during shift changes when deputy's vehicles enter or leave

the station grounds and short bursts of noise if deputies test their patrol car sirens prior to leaving on patrol. Sheriff's/police stations do not typically result in significant effects that require the preparation of an EIR (e.g., the State Clearinghouse, which receives CEQA documents from all public agencies in California, has received no EIRs for a sheriff's/police station since December 2009), and any impacts can be avoided by project design and operating protocols limiting the use of sirens. Mitigation, if necessary, will be site and project specific. Because site- and project-specific information is not available about future sheriff's stations, mitigation measures cannot be developed at this time. In any case, future sheriff's stations located in a zone where a discretionary permit is required will be subject to CEQA analysis. Potential impacts will be disclosed, and site- and project-specific mitigation measures will be developed at that time, if necessary. Due to the infrequency of an EIR being required for a sheriff's station, it can be reasonably assumed that these facilities do not result in unavoidable significant impacts. Therefore, this impact is expected to be less than significant.

As mentioned, Stanislaus County Ordinance Title 23 is intended to reduce impacts associated with public facilities that may be caused by new development.

Land Use Element

Existing Goal Four, Policy Twenty-Four (renumbered from Twenty-Two), under Implementation Measure 5, of the Land Use Element, requires current levels of service of public agencies to be determined and not allowed to deteriorate as a result of new development. Similarly, Existing Goal One, Policy Five of the general plan's Land Use Element ensures that residential development maximums will be based on environmental constraints, the availability of public services, and acceptable service levels.

Safety Element

GOAL TWO. Minimize the effects of hazardous conditions that might cause loss of life and property.

POLICY SEVEN. Adequate fire and sheriff protection shall be provided.

IMPLEMENTATION MEASURES

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.

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

6. 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.

Comments from the sheriff will be used to either condition or modify the project. Thus, as future development projects are implemented, SCSD will review each project for potential impacts on its facilities and personnel. If determined to be necessary, mitigation will be imposed to fund capital facilities and equipment for SCSD.

Significance without Mitigation: Less than significant (no mitigation required)

Impact SER-3: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives: Schools (less than significant)

StanCOG's regional growth forecast, adopted in the general plan updates, creates a reasonable expectation that population and housing within the public services study area will increase, which would result in an increase in school enrollment. The Stanislaus County Office of Education is responsible for supervising public school districts and schools in the public services study area. School districts, identified in Table 3.14-3, offer education to all school-age residents within Stanislaus County and operate independently of the county government. Elected governing school boards are responsible for budgeting and decision-making. Public schools are not subject to county planning or zoning code requirements when the local school board chooses to exempt them. The construction of new schools and expansion of existing schools are routinely exempted from county planning and zoning requirements and rarely subject to county review and approval. As a result, the county can neither deny nor place conditions on new or expanded schools.

The types, number, locations, physical sizes, and designs of future public schools that will be built to accommodate future growth from implementation of the general plan as amended by the project are unknown. The same is true for the expansion of existing schools. As a result, the potential environmental impacts of future schools cannot be known at this time. The typical environmental impacts of new or expanded schools include aesthetic impacts (particularly if there will be lighted athletic fields), loss of agricultural land (where the school is located on agricultural land), noise, and traffic. Schools often result in significant effects that require the preparation of an EIR, depending on the size and location. EIRs are typically required for new high schools because of significant impacts related to aesthetics, noise, and traffic, for example. In any case, future new or expanded public schools will be subject to CEQA analysis by the school district. Potential impacts will be disclosed, and site- and project-specific mitigation measures will be developed at that time, if necessary. Because new schools often require an EIR, and that implies that there may be significant impacts from the school, this impact is foreseeably significant. CEQA review and mitigation will be the responsibility of the school district undertaking such projects. Public school approval is outside the authority of the county and public school construction is not a component of the General Plan update project. Therefore, the update is not responsible for school construction and this impact is less than significant

Significance without Mitigation: Significant and unavoidable (no feasible mitigation available)

Impact SER-4: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives: Parks (no impact)

The Stanislaus County Department of Parks and Recreation is in charge of park and recreation facilities in the public services study area. StanCOG's regional growth forecasts, adopted in the general plan updates, indicate that population and housing within the public services study area will increase, which will result in an increase in park usage. To maintain or achieve acceptable acre-to-

resident ratios, the provision of new or physically altered park facilities will be required by the County. This has the potential to result in adverse environmental impacts.

Land Use Element

GOAL FOUR. Ensure that an effective level of public service is provided.

POLICY TWENTY-~~ONE~~THREE. At least three net acres of developed neighborhood parks, or the maximum number of acres allowed by law, should be provided for every 1,000 residents, through land dedication and development, payment of in-lieu-of fees, public facility fees, or other methods acceptable to the Parks Department.

Conservation/Open Space Element

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.

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.
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.~~

The project will not result in a shortage of park land.

The Parks Master Plan identifies a number of new and renovated facilities that would be built in the future to support increased demand for parks and recreational facilities, if financially feasible. Depending on location and final site design, large park and recreational facilities typically result in significant effects on aesthetics (if lighted athletic fields are included), biological resources (when located in sensitive habitats), cultural resources (when located along water courses where sensitivity tends to be highest), noise (if athletic fields are included), and traffic. Future parks will be subject to CEQA review and related mitigation for significant impacts. However, absent information on the location and site design for future parks, it is not possible at this time to establish mitigation measures for future park construction and operation. Typically, a regional park with lighted athletic fields can have significant and unavoidable impacts related to aesthetics, noise, and traffic. However, the present project does not propose amendments to the Parks Master Plan, nor does it implement that plan. The General Plan update is distinguishable from the Parks Master Plan and future impacts under that plan. The project would have no impact.

Significance without Mitigation: No impact

Impact SER-5: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives: Other public facilities (less than significant)

Stanislaus County Library, funded through a dedicated portion of the sales tax, provides all residents of the public services study area with library facilities and an inventory of books, periodicals, audiocassettes, videos, etc. StanCOG's regional growth forecasts, adopted in the general plan updates, create a reasonable expectation that population and housing within the public services study area could increase, which would result in an increase in library system use. To maintain or achieve acceptable ratios pertaining to square footage per capita, it is reasonably foreseeable that the provision of new or physically altered library facilities could be required, which would have the potential to result in adverse environmental impacts. The number, locations, and designs of future libraries and library expansions are unknown. As a result, the potential environmental impacts of future libraries, if any, cannot be known at this time.

Typical library impacts include a reduction in the parking supply on adjoining streets if off-street parking is insufficient and, if the library itself is historic, effects on historic resources. Libraries very seldom result in significant effects that require the preparation of an EIR (e.g., the State Clearinghouse, which receives CEQA documents from all public agencies in California, has received only one EIR for a library since December 2009; most library expansions were approved on the basis of categorical exemptions), and impacts tend to be minor. Mitigation, if necessary, would be site and project specific. Because site- and project-specific information is not available about future libraries, mitigation measures cannot be developed at this time.

Future libraries will be subject to CEQA analysis. Potential impacts will be disclosed, and site- and project-specific mitigation measures, if necessary, will be developed at that time. Due to the infrequency of an EIR being required for a library or library expansion, it can be reasonably assumed that these facilities do not result in unavoidable significant impacts. Therefore, this impact is expected to be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

3.14.4 References Cited

- American Planning Association. 1968. Planning the Public Library. Last revised: 12/1/1968. Available: <https://www.planning.org/pas/at60/report241.htm>. Accessed: 12/9/2014.
- California Building Standards Commission. 2013a. California State Fire Code. Last revised: 9/1/2013. Available: <https://law.resource.org/pub/us/code/bsc.ca.gov/gov.ca.bsc.2013.09.pdf>. Accessed: 12/1/2014.
- . 2013b. Title 24. Last revised: 9/1/2013. Available: <http://www.bsc.ca.gov/Codes.aspx>. Accessed: 12/1/2014.
- California Department of Education. 2014. Class Size Penalties. Last revised: 7/11/2014. Available: <http://www.cde.ca.gov/fg/aa/pa/cefcp.asp>. Accessed: 12/9/2014.

- California Department of Forestry and Fire Protection. 2012. Fire Hazard Severity Zone Maps. Last revised: 11/1/2007. Available: http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones.php. Accessed: 12/4/2014.
- California State Senate. 1998. Senate Bill 50. Last revised: 9/27/1998. Available: http://www.leginfo.ca.gov/pub/97-98/bill/sen/sb_0001-0050/sb_50_bill_19980827_chaptered.pdf. Accessed: 12/4/2014.
- Stanislaus Consolidated Fire Protection District. 2014a. Stanislaus County Fire Departments. Last revised: 1/1/2014. Available: <http://www.scfpd.us/index.cfm?Section=1&pagenum=197&titles=0>. Accessed: 12/1/2014.
- . 2014b. General Info/History. Last revised: 1/1/2014. Available: <http://www.scfpd.us/index.cfm?Section=33&PageNum=145>. Accessed: 12/1/2014.
- Stanislaus Council of Governments. 2014. 2014 Regional Transportation Plan/Sustainable Communities Strategy. Last revised: 6/1/2014. Available: <http://www.stancog.org/pdf/rtp/final-2014-rtpscs.pdf>. Accessed: 12/9/2014.
- Stanislaus County. 2014a. Stanislaus County Code. Last revised: 10/1/2014. Available: <http://qcode.us/codes/stanislauscounty/>. Accessed 12/8/2014.
- . 2014b. Office of Emergency Services. Last revised: 1/1/2014. Available: <http://www.stanoes.com/>. Accessed 12/2/2014.
- Stanislaus County Department of Parks and Recreation. 1994. Master Plan. Last revised: 1/1/1994. Available: <http://www.stancounty.com/er/PARKS/executive-summary.shtm>. Accessed: 12/4/2014.
- Stanislaus County Library. 2011. Stanislaus County Library Strategic Plan 2011-2015. Last revised: 7/1/2011. Available: <http://www.stanislauslibrary.org/pdf/StanislausStrategicPlanFinalJuly2011.pdf>. Accessed 12/8/2014.
- . 2013a. Annual Report 2012-2013. Last revised: 12/31/2014. Available: <http://www.stanislauslibrary.org/pdf/annualreport12-13.pdf>. Accessed: 12/1/2014.
- . 2013b. Locations & Hours. Last revised: 12/30/2014. Available: http://www.stanislauslibrary.org/about_hours.shtml. Accessed: 12/1/2014.
- Stanislaus County Office of Education. 2013a. Districts. Last Revised: 9/1/2013. Available: <http://stancoe.org/scoe/admin/schools-districts/>. Accessed 12/2/2014.
- . 2013b. Quick Facts about Stanislaus County and its Schools. Last Revised: 9/1/2013. Available: http://www.stancoe.org/scoe/admin/public_info/quick_facts/quickfactsWelcome.htm. Accessed 12/2/2014.
- Stanislaus County Sheriff's Department. 2014. Operations Division. Last revised: 1/1/2014. Available: <http://www.scsdonline.com/operations-division/>. Accessed 12/3/2014.
- Stanislaus Local Agency Formation Commission. 2007. Municipal Service Review – Chapter 2: Overview of Fire and Emergency Services in Stanislaus County. Last revised: 4/25/2007. Available: <http://www.stanislauslafco.org/info/PDF/FireMSR/Ch2-Overview.pdf>. Accessed: 12/4/2014.
- State of California. 2012. California Health and Safety Code. Last revised: 1/1/2012. Available: <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc>. Accessed: 12/4/2014.

3.15 Recreation

3.15.1 Introduction

This section discusses the impacts of the plan updates with respect to recreation. It lists the thresholds of significance that form the basis of the environmental analysis, describes the recreation study area and major sources used in the analysis, provides environmental setting information that is relevant to recreation, and assesses whether the plan updates would result significant impacts with respect to recreation.

Study Area

The recreation impact study area for the project is defined as Stanislaus County.

3.15.2 Environmental Setting

This section describes the state and local regulations and policies that are applicable to the plan updates and the existing conditions pertaining to recreation in the recreation study area. The existing conditions constitute the baseline for this analysis.

Regulatory Setting

The provision of parkland is authorized at the state level by California Government Code Section 66477, commonly called the Quimby Act. At the local level, the Stanislaus County General Plan and the Stanislaus County Parks Master Plan guide the dedication and maintenance of recreational facilities within the unincorporated areas of Stanislaus County.

State

Quimby Act

The Quimby Act (California Government Code Section 66477), enacted in 1966, is a state law, applied at the local level, that specifies the parkland dedication requirements for new residential subdivisions. The Quimby Act authorizes local jurisdictions to require developers of new residential subdivisions to dedicate up to three acres of park area per 1,000 persons or, if the amount of existing neighborhood and community park area exceeds that limit, the jurisdiction can require that existing ratio, not to exceed five acres of land per 1,000 persons, or to pay in-lieu fees for park or recreational purposes. The local jurisdiction must adopt Quimby Act provisions as part of its subdivision ordinance in order to impose the exactions allowed by the act. Alternatively, if the local jurisdiction has Quimby Act standards in its general plan, it can impose park and recreation exactions on subdivisions through the requirement that the subdivision be consistent with the general plan (Government Code Section 66474[a]). Although the Quimby Act authorizes the dedication of new parkland, it does not address the development, operation, or maintenance of new park facilities. Therefore, the Quimby Act provides open space needed to develop park and recreational facilities, but does not ensure the development of the land or the provision of a park.

Subdivision Map Act

The Subdivision Map Act (California Government Code Section 66410, et seq.) sets forth the conditions for approval of a subdivision map and requires enactment of subdivision ordinances by which local governments have direct control over the types of subdivision projects to be undertaken and the physical improvements to be installed. The act requires a subdivision's design to coordinate with community plans and ensures that subdividers will properly complete areas dedicated for public purposes.

Local

At the local level, the dedication, operation, and maintenance of recreational facilities on the project site and surrounding area is guided by the County General Plan. Policy Twenty-One, described below, implements the Quimby Act. It sets standards for the acquisition of lands for parks and recreational purposes, or the payments of fees in lieu thereof, on any discretionary residential development project that is subject to land subdivision. At least three net acres of developed neighborhood parks, or the maximum number of acres allowed by law, should be provided for every 1,000 residents through land dedication and development, payment of in-lieu-of fees, or other methods the County Department of Parks and Recreation considers acceptable.

Stanislaus County General Plan

Land Use Element

GOAL 1. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY TWO. Land designated Agriculture shall be restricted to uses that are compatible with agricultural practices, including natural resources management, open space, outdoor recreation and enjoyment of scenic beauty.

POLICY FIVE. Residential densities as defined in the General Plan shall be the maximum based upon environmental constraints, the availability of public services, and acceptable service levels. The densities reflected may not always be achievable and shall not be approved unless there is proper site planning and provision of suitable open space and recreational areas consistent with the supportive goals and policies of the General Plan.

GOAL THREE. Foster stable economic growth through appropriate land use policies.

POLICY SEVENTEEN. Promote diversification and growth of the local economy.

IMPLEMENTATION MEASURE

5. Allow private recreational uses where they are not found to cause land use conflicts.

GOAL FOUR. Ensure that an effective level of public service is provided in unincorporated areas.

POLICY TWENTY-ONE. At least three net acres of developed neighborhood parks, or the maximum number of acres allowed by law, should be provided for every 1,000 residents, through land dedication and development, payment of in-lieu-of fees, or other methods acceptable to the Parks Department.

IMPLEMENTATION MEASURE

1. Continue to implement the strategies identified under Goal Four of the Conservation/Open Space Element.

POLICY TWENTY-TWO. 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.

IMPLEMENTATION MEASURE

- Benefit assessment districts, County Service Areas (CSA's), Mello-Roos Districts, or other similar districts shall be formed as needed to pay for the cost of providing ongoing appropriate services.

Community Plans

Stanislaus County has adopted Community Plans for most of the unincorporated towns in the county. These plans outline the future growth pattern of the town. Each plan is used in conjunction with the general plan to indicate whether the Urban Transition area will be residential, commercial, industrial, etc. Any requests for rezoning of property designated Urban Transition in the general plan must be consistent with the proposed use category in the Community Plan. The actual level of future residential development within the adopted Community Plans is limited by county Measure E. This initiative measure requires a popular vote prior any general plan amendment or rezoning of designated agricultural or open space land to allow residential development.

To develop land within the sphere of influence designated Urban Transition in the Land Use Element of the Stanislaus County General Plan, the developer must request a general plan amendment, rezoning, and submit a tentative map (assuming the land is not designated as agricultural or open space in the general plan). The latter is required only if development of the property is dependent on approval of a tentative map. The combining Urban Service (US) zone shall be used for all such rezoning. Use of this zone will require that the property annex to the appropriate service district (sanitary, water, or community services) prior to development while still requiring that the underlying zone be consistent with the general plan designation.

Denair Community Plan

Public Facilities. The community of Denair contains Hunter's Point Park and Flood Control Basin (2.51 acres) and Sterling Ranch Park (4.2 acres). The County's minimum standard for providing adequate parkland is three acres of parkland per 1,000 residents. The Community Plan diagram depicts the general location of future neighborhood and community park sites. The general locations of future park sites are conceptual and indicative of park locations based on service area radius, major streets and surrounding land uses. Parks should be located in the general vicinity shown in the Community Plan.

The following general standards define the various park designations identified in the Denair Community Plan:

Neighborhood Park - 3 to 5 acres. Neighborhood parks are designed to meet local "neighborhood" needs, and are intended to be within walking or bicycling distance of one-half mile from neighborhood residences. A neighborhood park service area should avoid crossing any major natural or manmade barriers (e.g., railroads, canals, and major roads) that inhibit access to the park. Neighborhood parks usually emphasize child oriented facilities, providing a variety of play spaces and associated amenities.

Community Park - 10 to 15 acres. A community park should serve the community and be developed to serve specific recreational needs such as baseball, softball, hard court areas, swimming pool, recreation center. Patrons of these facilities are expected to drive to the park. As such, community parks should provide adequate parking areas and access from collector and/or major roads. The location of the community park should avoid the need to travel through neighborhoods. Care must be taken when siting a community park to avoid conflicting with nearby residential uses. Community parks can be developed as joint-use facilities able to accommodate seasonal storm drainage basins.

Parks and Recreation. The Denair Community Services District provides park and cultural activity centers services in the community. The community's current parkland inventory does not meet the county standard of three acres of parkland per 1,000 residents. The Community Plan illustrates the general location of future park sites, including 1 community park and 3 neighborhood parks.

GOAL FOUR. Provide for the recreational needs of residents of the Denair Community.

POLICY ONE. New development shall provide the residents of Denair with adequate parkland facilities to meet the County standard of 3 acres per 1,000 residents.

IMPLEMENTATION MEASURE

1. The County shall work to acquire and develop parkland, including adequate facilities to accommodate one community park. The general location of future park sites is portrayed on the Community Plan diagram.

Keyes Community Plan

Parks. Hatch Park and Bonita Ranch Park and Storm Drainage Basin serve the residents of Keyes. Hatch park does not meet the County's minimum standard of providing 3 net acres of parkland/1,000 residents needed to support the community's current population. To accommodate growth, the Community Plan diagram envisions the expansion of Hatch Park into a community park. The Community Plan also identifies the general location of future neighborhood park sites. The neighborhood park symbols do not denote precise park locations, but suggest approximate locations for additional parkland acquisitions.

The following general standards define the various park designations identified in the Keyes Community Plan:

Neighborhood Park - 3 to 5 Acres. Neighborhood parks are designed to meet local "neighborhood" needs, and are intended to be within walking or bicycle distance of one-half mile from neighborhood residences. A neighborhood park service area should avoid crossing any major barriers (e.g., canals, collectors or major roads) that inhibit access to the park. Neighborhood parks should emphasize child-oriented facilities providing a variety of play spaces and associated amenities. Neighborhood parks should also be bound on all four sides by local streets to promote safety and public access.

Hatch Community Park - 15+ Acres. To provide for recreational needs of the community such as baseball, softball, and hard court areas, and family-oriented activities such as picnic areas and an indoor recreation center, Hatch Park should be enlarged to provide a minimum of 15 acres. Patrons are expected to drive to this facility. As such, Hatch Park should be bound by streets to minimize on-site parking requirements. As a highly active center, residential or other noise sensitive land uses should not directly abut the park.

Parks and Recreation. The County provides and maintains two park facilities within the community of Keyes. The community's current parkland inventory does not meet the County standard of 3 acres of parkland per 1,000 residents needed to support the community's present population. The Community Plan includes expanding Hatch Park into a 15 acre Community Park. The Community Plan also depicts the general location of future neighborhood park sites.

GOAL SEVEN. Provide for the recreational needs of the residents of the Keyes Community.

POLICY ONE. The County shall support expansion of Hatch Park as a Community Park.

POLICY TWO. The County should acquire additional parkland, pursuant the Keyes Community Plan, to meet the future parkland needs of the Keyes Community. Total parkland inventory should be consistent with the County standard of 3 acres of parkland per 1,000 residents.

IMPLEMENTATION MEASURES

1. The County shall acquire lands to the north and east of Hatch Park to accommodate expansion of the Hatch Park site and promote development of a 15+ acre community park.
2. The County, in conjunction with the Keyes Municipal Advisory Committee and other interested groups, shall work to upgrade and expand the facilities at Hatch Park to include facilities normally associated with a Community Park (e.g., baseball fields, community center, soccer fields).

Salida Community Plan

The Salida Community Plan (“Community Plan” or “Plan”) provides land use planning and guidance for development of approximately 4,600 acres of land in the Salida area. The Community Plan encompasses the existing community of Salida, which was part of the previously approved Salida Community Plan (the “Existing Plan” or “Existing Plan Area”), and an amendment area encompassing approximately 3,383 acres (the “Amendment Area”).

Neighborhood Parks. Neighborhood parks are intended to serve residents within one-quarter to one-half mile, be within an appropriate walking or cycling distance, and be connected by a multi-use trail system where possible. The Stanislaus County Parks Master Plan suggests that neighborhood parks be provided at a ratio of at least three acres of park land for every 1,000 people. A population increase of 15,063 people is projected, should the new designated Low-Density, Medium-Density, and Medium High-Density residential areas be build out within the Amendment Area to their maximum potential. If maximum buildout is achieved, 45 acres of neighborhood parks would be needed to meet County standards. Satisfaction of park provision requirements may also be met through payment of park in-lieu fees. However, given the need for local park facilities within local neighborhoods in the Amendment Area, it is anticipated that park requirements will be largely met through provision of parkland. The Community Plan illustrates the general location of potential neighborhood park sites. Where possible, neighborhood parks are placed adjacent to new or existing schools. Co-location of parks and school facilities maximizes the recreational utility of both types of facilities; a full range of complementary recreational opportunities can be provided in one location. Neighborhood parkland may also be designed to serve the dual-uses of recreation and temporary storm water detention. This approach improves land use efficiency.

Conservation and Open Space Element

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.

IMPLEMENTATION MEASURES

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 issues related to neighborhood parks and open space in urban settings as well as regional parks that serve the entire County population.
3. The County shall adopt design standards for urban parks by June 30, 1996.
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.
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 to the greatest extent possible.

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.
7. The County shall require at least three net acres of developed neighborhood parks to be provided for every 1,000 residents.

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

IMPLEMENTATION MEASURES

1. The County shall encourage the multiple use of reservoirs as flood control devices, recreational facilities, and wildlife habitats.
2. The County shall, when funds become available, install boat ramps where appropriate.

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.)
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.

POLICY FIFTEEN. Coordinate the provision of recreation needs with other providers such as the Army Corps of Engineers, the State Resources Agency, school districts, 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.
2. The County will assume responsibility for parks, when financially feasible, dedicated to them by state or federal agencies.
3. Prior to the issuance of any building permit on parcels fronting the Stanislaus River, it shall be verified that the building site is outside of Army Corps of Engineers easements.
4. An inventory of recreational facilities shall be maintained for use in park and recreational facilities planning.

Stanislaus County Public Facilities Fee Program

The Public Facilities Fee program imposes a fee on new development per the state Mitigation Fee Act (Government Code Section 66000 et seq.). Revenues from this “impact fee,” fund the pro-rata extension of existing County capital facilities to support the new growth created by the development. The use of this fee is limited to capital improvements or facilities, and cannot be for operations (i.e., salaries). The fee reflects the projected cost of needed facilities, as shared by individual new developments. It does not replace, repair or maintain the existing level-of-service provided by the County.

Fees collected under this program pay for capital improvements related to regional and neighborhood parks, among other things. The fees are adjusted on a regular basis to account for changes in cost or in development forecasts.

Stanislaus County Capital Improvement Plan for Fiscal Year 2013–2014

The Stanislaus County Capital Improvement Plan for Fiscal Year 2013–2014 is a companion planning document to the Stanislaus County Budget, approved in its final form by the Board of Supervisors on September 10, 2013. The list of planned major capital expenditures is the culmination of the goals and objectives of each of the county's departments, ranked by the status of each project's readiness to proceed based on funding and board approval status, review and approval of the Board of Supervisors, and evaluation of the consistency of these projects with the County's General Plan and other specific plans. The Capital Improvement Plan, when approved by the board as final, provides a long-range vision of major project initiatives and capital expenditures. The adopted final Capital Improvement Plan consolidates lists of projects from numerous county plans, including transportation and infrastructure projects, and focused departmental plans, such as the Parks Master Plan, Public Safety Center Neighborhood Site Master Plan, and other strategic plans, ranked by their implementation priority. The parks and recreational facilities identified in the Capital Improvement Plan are discussed below.

Stanislaus County Parks Master Plan

The Stanislaus County Parks Master Plan, written in 1999, provides a comprehensive overview to guide the Board of Supervisors, Parks and Recreation Commission, and the Department of Parks and Recreation as they work to meet a variety of goals for parklands and users over the next 20 years. In 1994, Stanislaus County updated its general plan and charged the Parks and Recreation Commission and the Department of Parks and Recreation with the task of accomplishing several goals with the development of a master plan. Development of this long-range plan has included a needs assessment, specific park plans, future planning, development of design standards, and economic and fiscal planning.

Stanislaus County does not have a parks fee, but it does have a "Quimby Act" provision in the general plan that would allow for the collection of a fee or dedication of land for park and recreational facilities as a condition of subdivision approval.

Existing Conditions

Recreational amenities in Stanislaus County include a range of state and local recreational facilities. For the purposes of this EIR, only county-operated facilities related to the general plan are discussed.

County Recreational Facilities

Stanislaus County categorizes parks and recreational facilities as fishing access areas, neighborhood parks, or regional parks. Neighborhood parks, generally one-half to four acres in area, are oriented toward the recreational needs of families and may include sports facilities and picnic areas. Regional parks, ranging from 100 to 6,500 acres, are intended to serve a region larger than an individual community. They may include all of the amenities typically found at neighborhood and community parks but may also feature facilities such as amphitheaters, trails, campgrounds, and interpretive centers. The county has adopted Community Plans for most of the unincorporated communities in the county to outline the future growth pattern of the town.

The county is responsible for managing and maintaining parks (Stanislaus County 2014a and 2014b). Additionally, cities within Stanislaus County operate their own parks, which are available for use by all residents.

Table 3.15-1. Existing Local Parks and Recreational Facilities

Park/Facility Name	Location	Park Operator	Acreage
Fishing Access			
Basso Bridge Fishing Access	Route 132	Stanislaus County	NA
Fox Grove Recreation and Fishing Access	Geer Road	Stanislaus County	NA
Las Palmas Fishing Access	East of Patterson	Stanislaus County	NA
Riverdale Park Fishing Access	Hatch Road and Carpenter Road	Stanislaus County	NA
Shilo Fishing Access	Tuolumne River	Stanislaus County	NA
Turlock Reservoir Fishing Access	Turlock Lake State Recreation Area	Stanislaus County	NA
Neighborhood Parks			
Bonita Park and Pool	Crows Landing	Stanislaus County	1
Bonita Ranch Park and Flood Control Basin	Keyes	Stanislaus County	8
Burbank-Paradise Park	Modesto	Stanislaus County	1
Countrystone Park	Salida	Stanislaus County	8
Empire Tot-Lot	Empire	Stanislaus County	0
Empire Community Park and Regional Water Safety Training Center	Empire	Stanislaus County	6
Fairview Park	Modesto	Stanislaus County	5
Grayson United Community Park	Grayson	Stanislaus County	5
Hatch Park	Keyes	Stanislaus County	5
Hunters Pointe Park	Denair	Stanislaus County	3
John Murphy Park	Salida	Stanislaus County	4
Leroy F. Fitzsimmons Memorial Park	Grayson	Stanislaus County	1
Mono Park	Modesto	Stanislaus County	2
Oregon Drive Park	Modesto	Stanislaus County	2
Parklawn Park	Ceres	Stanislaus County	4
Salida Park	Salida	Stanislaus County	2
Segesta Park	Salida	Stanislaus County	9
Sterling Ranch Park	Denair	Stanislaus County	4
Wincanton Park		Stanislaus County	3
Neighborhood Parks Total			73 acres

Park/Facility Name	Location	Park Operator	Acreage
Regional Parks			
Frank Raines Regional Park	Del Puerto Canyon Road	Stanislaus County	2,040
La Grange Regional Park	La Grange	Stanislaus County	730
Laird Regional Park	East of Grayson	Stanislaus County	97
Modesto Reservoir Regional Park	North of Oakdale	Stanislaus County	6,040
Tuolumne River Regional Park		Stanislaus County	1,246
Woodward Reservoir Regional Park	East of Waterford	Stanislaus County	6,667
Regional Parks Total			<u>16,820 acres</u>
Total			<u>16,893 acres</u>

Sources: Stanislaus County 1999, 2014a, 2014b, 2014d, 2014e; Gomez pers. comm.

According to the Stanislaus County Parks Master Plan, the overall acreage of regional parklands is adequate to serve the future populations. However, the master plan identified a large statistical shortfall in neighborhood parklands (a shortfall of 279 acres, compared with 35 acres in 1999). Since publication of the plan, some parks have been developed, but a shortfall still exists. Existing Policy Twelve of Goal Four of the Conservation/Open Space Element requires the county to provide a system of local and regional parks that will serve county residents by requiring the county to provide at least three net acres of developed neighborhood parks for every 1,000 residents. The County's Quimby Act provision is provided in existing Policy Twenty-One of Goal Four of the Land Use Element, and states that least three net acres of developed neighborhood parks, or the maximum number of acres allowed by law, should be provided for every 1,000 residents, through land dedication and development, payment of in-lieu-of fees, or other methods acceptable to the Parks Department. In addition, the Subdivision Map Act requires that subdivisions must be consistent with general plans in order to be approved. Therefore, subdivisions must be consistent with this ratio. Based on an unincorporated population of 110,236 residents in 2010 (Stanislaus Council of Governments 2014), the county should have 331 acres of existing neighborhood parks. With only 73 acres of neighborhood parks, that leaves a shortfall of 258 acres.¹

The locations of the current regional parks have left a gap in service in the southwestern portion of the county. To fulfill this need, the Parks Master Plan recommended construction of a regional park to serve the area encompassed by the communities of Turlock, Patterson, Crows Landing, and Newman. The park would focus on the San Joaquin River, with a minimum of 250 acres to accommodate a variety of recreational opportunities and provide dedicated open space to conserve unique resources (Stanislaus County 2014c). This park has not been constructed (Gomez pers. comm.). The Parks Master Plan identified a second area of regional shortages, including access to the Tuolumne River between the existing access points at La Grange/Basso Bridge, Fox Grove, Tuolumne River Regional Park, Riverdale, and Shilo, to improve the opportunities for short day trips on the river. As recommended by the plan, these additional regional facilities could be developed on relatively small parcels (three to 10 acres); together, they would form a larger regional facility.

¹ 110,236 residents/1,000*3 acres= 331 acres

Potential sites included South Appling Way in Waterford and near the Turlock Lake Campground (Stanislaus County 2014c). These facilities have not been constructed (Gomez pers. comm.).

New Recreational Facilities

The Stanislaus County Capital Improvement Plan for Fiscal Year 2013–2014 includes 19 park and recreation projects, including upgrades to existing parks, new playgrounds, new parks, and picnic shelters, which are listed as future project/master planned. These projects are expected to cost approximately \$20 million, but the county has identified funding sources for only \$8 million (approximately). Additionally, the county has recommended additional projects for inclusion on the list, including the Bonita Pool and Restroom Renovations, Interactive Splash Playground at Bonita Pool, Riverdale Park and Fishing Access (all slated to start in 2014 and end in 2020), and the Woodward Reservoir, T-Island, and Muir Point campsites (expected to have started in 2013 and end in 2016). The estimated cost for these projects is \$2,649,740 (Stanislaus County 2013).

3.15.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan updates; discusses the individual impacts relative to the thresholds of significance; discusses mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and indicates the overall significance of the impact with mitigation incorporated.

Major Sources Used in Analysis

The major sources used in this analysis are listed below:

- Stanislaus County General Plan
- County Department of Parks and Recreation (<http://www.stancounty.com/er/parks/>)
- Stanislaus County Parks Master Plan

Approach and Methodology

The analysis of the proposed project's impacts on recreational resources was conducted using a review of local recreation planning documents, including the Stanislaus County General Plan Land Use and Conservation/Open Space Elements and the Stanislaus County Parks Master Plan. Because the existing population within the unincorporated county will change under buildout of the proposed project, the park and recreation impact assessment in this section is based on a comparison of existing county park and recreation land versus the amount of park and recreation land necessary to serve the population under the proposed project. Therefore, this analysis is an evaluation of the prospective impacts of future recreational facilities or the expansion of existing facilities that would be allowed under implementation of the proposed project to meet the adopted area standards related to parks and recreation.

Thresholds of Significance

Based on State CEQA Guidelines, Appendix G, the plan updates would have a significant impact with respect to recreation if they would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated.

- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

Impacts and Mitigation Measures

Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated (significant and unavoidable)

The proposed project integrates population projections adopted by StanCOG that extend the planning horizon to 2035. StanCOG's regional growth forecast predicts a population of 133,753 for the unincorporated county jurisdiction in 2035, which represents an increase of approximately 21% from its unincorporated population of 110,236 residents in 2010 (Stanislaus Council of Governments 2014). There is a reasonable expectation that the population and housing within the public services study area will increase. The population and housing increase projected under the proposed project would increase the demands on Stanislaus County parks and recreational facilities.

Table 3.15-2. Shortages in Neighborhood Parks

	Existing	Acres Needed to Meet 2010 Population	Acres Needed to Meet 2035 Population
Neighborhood Parks (acres)	73	331	401
Shortage		258	328

As described in *Regulatory Setting*, above, existing Goal Four, Policy Twelve of the Conservation/Open Space Element requires the county to provide a system of local and regional parks that serve county residents by requiring the county to provide at least three net acres of developed neighborhood parks for every 1,000 residents. The proposed project includes the same requirement. Although the county does not have a Quimby Act provision or parks fee, the Subdivision Map Act requires that subdivisions must be consistent with general plans in order to be approved. Therefore, subdivisions must be consistent with this ratio. To meet this standard, the county should have 331 acres of existing neighborhood parks; it has only 73 acres. This shortfall would increase with an increase in population. Based on the StanCOG predicted population in 2035, the county should have 401 acres of neighborhood parks by 2035.² If no additional neighborhood parks are built, the county would face a shortfall of 328 acres of neighborhood parks in 2035. Although the county has recreational facility projects slated for construction in its Capital Improvement Plan for Fiscal Year 2013–2014, as described in the Existing Conditions section, none of the projects are specified in the proposed project. With that shortfall, existing neighborhood park facilities may experience additional use such that substantial physical deterioration of the facilities would occur or be accelerated. To the extent that repairs cannot be funded through the Public Facilities Fee, this physical change in existing facilities would be significant and unavoidable.

Significance without Mitigation: Significant and unavoidable (no mitigation available)

² 133,753 residents/1,000*3 acres = 401 acres.

Impact REC-2: Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment (less than significant)

The county has an adequate number of regional parks to serve the existing population and the 2035 population, but it is currently lacking neighborhood parks, as described in Impact REC-1. With the forecast increase in population in the unincorporated parts of Stanislaus County by 2035, this shortfall in neighborhood parks will remain the same because new development will provide required parks for future residents. However, that will not be the result of the General Plan update. To meet the neighborhood parks ratio, as listed in Policy Twelve of the existing general plan, the county would need to provide a total of 401 acres of neighborhood parkland, or an additional 328 acres, between 2014 and 2035 to accommodate StanCOG's anticipated population in 2035. This demand will be met through the Public Facilities Fee, which includes funds for neighborhood parks, and under amended Implementation Measure 1, Policy Twelve, Goal Four of the Conservation Element.

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,

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

Neighborhood parks may include playgrounds, picnic areas, and sports fields (Stanislaus County 1999). If a neighborhood sports park were built, it would require approximately 10 acres of land to accommodate sports fields, parking for 110 cars, concessions, restrooms, picnic areas, and playground equipment; it would also require night lighting (Stanislaus County 1999).

Typical environmental impacts of expanding neighborhood parks include construction noise and temporary disruption of access. The same is true of building new neighborhood parks. When in use, neighborhood parks typically have noise, lighting (if there are lighted ball courts), and minor traffic impacts on their surrounding neighborhoods. They may also disrupt biological resources, depending on their location. Given the small size of neighborhood parks, the impacts are usually not intensive enough to be significant. The State Clearinghouse, which receives CEQA documents from all public agencies in California, has received no EIRs for a neighborhood park since October 2009, and any impacts can be mitigated below a level of significance. Mitigation, if necessary, would be site and project specific. Because site- and project-specific information is not available for future fire stations, mitigation measures cannot be developed at this time.

The general plan also updates the Conservation/Open Space Element as follows.

GOAL FOUR. Provide for the open space recreational needs of the residents of the County

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

IMPLEMENTATION MEASURES

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.

Construction of any future parks would be subject to CEQA analysis. Potential impacts would be disclosed, and site- and project-specific mitigation measures would be developed at that time, if necessary. Based on typical neighborhood parks and the infrequency of the need to prepare an EIR for a neighborhood park, this impact is expected to be less than significant. No mitigation is required.

Significance without Mitigation: Less than significant (no mitigation required)

3.15.4 References Cited

Printed References

- City of Ceres. 1997. *City of Ceres General Plan*. Available: <http://www.ci.ceres.ca.us/GeneralPlan.pdf>. Accessed: December 19, 2014.
- City of Modesto. 2008a. City of Modesto. 2008. Final Urban Area General Plan. Available: <http://www.modestogov.com/ced/pdf/planning/documents/general-plan/technical/urban%20area%20general%20plan.pdf>. Accessed: December 19, 2014.
- . 2008b. City of Modesto Community and Economic Development Department. 2008. City of Modesto Final Master EIR for the Urban Area General Plan Update. Available: <http://www.modestogov.com/ced/pdf/planning/documents/meir/technical/master%20eir.pdf>. Accessed December 19, 2014.
- Stanislaus Council of Governments. 2014. 2014 Regional Transportation Plan/Sustainable Communities Strategy. Last revised: 6/1/2014. Available: <http://www.stancog.org/pdf/rtp/final-2014-rtpsc.pdf>. Accessed: 12/9/2014.
- Stanislaus County. 1999. *Stanislaus County Parks Master Plan*. Prepared for the Stanislaus County Parks and Recreation Department by Amphion Environmental, Inc. with Applied Development Economics 2M Associates.
- . 2013. *Recommended Final Capital Improvement Plan Fiscal Year 2013-2014*. Available: <http://www.stancounty.com/capitalprojects/FY2013-2014/pdf/capital-improvement-plan.pdf>. Accessed: December 11, 2014.
- . 2014a. *Community Parks, Facilities, and Fishing Accesses*. Available: <http://www.stancounty.com/er/parks/pdf/community-parks-brochure.pdf>. Accessed: December 8, 2014.
- . 2014b. *Regional and Off-Highway Vehicle Parks*. Available: <http://www.stancounty.com/ER/PARKS/pdf/off-highway-vehicle-regional-parks.pdf>. Accessed: December 8, 2014.
- . 2014c. *Master Plan Executive Summary*. Available: <http://www.stancounty.com/er/parks/executive-summary.shtm>. Accessed: December 10, 2014.
- . 2014d. *Woodward Reservoir Regional Park*. Available: <http://www.stancounty.com/parks/pdf/reservoirs-brochure-wr.pdf>. Accessed: December 10, 2014.

———. 2014e. *Modesto Reservoir Regional Park*. Available <http://www.stancounty.com/parks/pdf/reservoirs-brochure-mr.pdf>. Accessed: December 10, 2014.

U.S. Census. 2014a. *State & County QuickFacts Ceres*. Available: <http://quickfacts.census.gov/qfd/states/06/0612524.html>. Accessed December 19, 2014.

———. 2014b. *State & County QuickFacts Oakdale*. Available: <http://quickfacts.census.gov/qfd/states/06/0652694.html>. Accessed: December 22, 2014.

———. 2014c. *State & County QuickFacts Modesto*. Available: <http://quickfacts.census.gov/qfd/states/06/0648354.html>. Accessed: December 22, 2014.

Personal Communications

Clark, Thom. Public Services Director. City of Oakdale. Phone and voicemail communication regarding acres of parkland in city.

Gallagher, Kelly. Operations Manager. City of Modesto. Phone communication regarding acres of parkland in Modesto.

Gomez, Cathy. Project Coordinator. Stanislaus County Department of Parks and Recreation. Phone and email communication regarding county parks and fishing access facilities.

3.16 Transportation and Traffic

3.16.1 Introduction

This section describes potential impacts on the transportation system associated with adoption of the 2035 Stanislaus County General Plan update. The impact analysis examines the roadway, transit, bicycle, pedestrian, rail, and aviation components of the overall transportation system. To provide a context for the impact analysis, this section begins by discussing the environmental and regulatory setting that will be the baseline for analysis, then identifies the thresholds of significance against which the plan will be evaluated, followed by an assessment of whether the plan updates would result in significant impacts with respect to transportation and traffic.

Study Area

The transportation and traffic impact study area for the project is defined as Stanislaus County.

3.16.2 Environmental Setting

This section describes the state, regional, and local regulations and policies that are applicable to the plan updates, and the existing conditions pertaining to transportation and traffic in the study area.

Regulatory Setting

This section describes the state, regional, and local regulations related to transportation and traffic that would apply to the plan updates.

State

The California Transportation Commission (CTC) administers the public decision-making process that sets priorities and funds projects envisioned in long-range transportation plans. CTC's programming includes the State Transportation Improvement Program (STIP), a multi-year capital improvement program of transportation projects on and off the State Highway System, funded with revenues from the State Highway Account and other funding sources. The California Department of Transportation (Caltrans) manages the operation of state highways that serve Stanislaus County, including Interstate 5 (I-5), State Route (SR) 4, SR 33, SR 99, SR 108, SR 132, and SR 219.

Caltrans has completed transportation or route concept reports for a number of state freeways and highways in Stanislaus County. These reports identify long-range improvements for specific state freeway and highway corridors and establish the "concept," or desired, level of service (LOS) for specific corridor segments. The reports also identify long-range improvements needed to bring an existing facility up to expected standards needed to adequately serve 20-year traffic forecasts. Additionally, the reports identify the ultimate design concept for conditions beyond the immediate 20-year design period. Stanislaus County freeways and highways with concept reports are I-5, SR 4, SR 33, SR 99, SR 108, SR 132, and SR 219. A limitation of these reports is that they do not consider funding availability.

Senate Bill 743 (Chapter 386, Statutes of 2014)

Under SB 743, the Office of Planning and Research and the Natural Resources Agency are to formulate and adopt amendments to the CEQA Guidelines that replace level of service with “vehicle miles travelled” (VMT) as the metric for measuring traffic impacts. The practical effect of this change, when enacted, will be to switch from a concern over localized traffic congestion to area or regional trip generation. The purpose of SB 743 is to encourage the reduction of VMT and the associated production of greenhouse gases at the individual project level. At this writing, the Office of Planning and Research has not completed drafting the proposed amendments and the Natural Resources Agency has not initiated the administrative rulemaking to adopt the amendments. As a result, the content of the amendments cannot be known and level of service remains the standard for determining the significance of traffic impacts. The CEQA Guidelines amendments are expected to take effect at some time in late 2016 or early 2017.

Regional

Regional Transportation Plan—Sustainable Communities Strategy

The Stanislaus Council of Governments (StanCOG) is responsible for regional transportation planning in Stanislaus County. The *Final 2014 Regional Transportation Plan/Sustainable Communities Strategies* (2014 RTP/SCS) (Stanislaus Council of Governments 2014) is a federally mandated, long-range, fiscally constrained transportation plan for Stanislaus County. “Fiscally constrained” means that the transportation improvements listed in the 2014 RTP/SCS are those that have an existing or expected source of financing.

The 2014 RTP/SCS addresses new requirements, including Senate Bill (SB) 375, which calls for reductions in greenhouse gas (GHG) emissions from automobiles and light trucks through transportation investment and land use planning, as well as new federal mandates under MAP-21 (Moving Ahead for Progress in the 21st Century), the national transportation authorization bill that emphasizes a performance-based planning approach. The 2014 RTP/SCS, which matches transportation investment priorities with desired land uses, represents StanCOG’s regional vision for a more sustainable, healthy, and equitable region with multimodal transportation options available for all users. Projects identified in the plan include roadway enhancements, transit expansions, new bicycle and pedestrian facilities, and new programs to better manage the existing transportation network. The 2014 RTP/SCS itself does not control land use within the county or exert power over county land use decisions. Rather, the 2014 RTP/SCS is a steering document for StanCOG’s vision (Stanislaus Council of Governments 2014).

StanCOG is the Congestion Management Agency (CMA) for the Stanislaus County region. As the CMA, StanCOG has the responsibility to prepare and maintain a Congestion Management Plan (CMP). The CMP is an integrated component of StanCOG’s planning process in which a systematic progression of activities to analyze and address regional congestion is integrated into the plan and Federal Transportation Improvement Program (FTIP) planning processes. The CMP was most recently updated in January 2010.

Future roadway capital improvement projects identified as “Tier I” (financially constrained) and “Tier II” (financially unconstrained) in the 2014 RTP/SCS were determined to still support identified CMP congestion relief needs. Financially constrained improvements are those for which funding has been identified and is expected to be available at the time it is needed. The Tier I improvements

expected to be constructed by 2035 are included in the evaluation of the 2035 Stanislaus County General Plan.

In 2013, StanCOG updated its *Non-Motorized Transportation Plan* (NMTP) to guide the region toward the goal of increasing safe, alternative modes of transportation by providing bikeways and trails for all residents. StanCOG recognized that the NMTP was a necessary component of effective system planning and a critical element of promoting sustainable transportation options. The primary focus of the NMTP is to increase access to important nodes such as neighborhoods, employment centers, shopping areas, schools, and recreational sites by non-auto modes. The NMTP also provides for the expansion of bicycle and pedestrian facilities and infrastructure in the cities and communities. A goal of the NMTP is to make bicycling and walking a viable option for shopping, school, work, and other trips of less than 5 miles in Stanislaus County. It is anticipated that by promoting and providing facilities for bicycle and pedestrian trips, this will result in lower vehicle miles traveled (VMT) and ultimately reductions in GHG emissions for the Stanislaus County region.

Congestion Management Plan

In 1990, California voters approved legislation requiring that a CMP be developed to address congestion on California's highways and roads. A year later, the similar Federal Congestion Management System requirement was first introduced in the Intermodal Surface Transportation Efficiency Act. StanCOG adopted its first CMP in April 1995 based on California state law and proposal federal regulations. StanCOG's adopted 2009 CMP fulfills the legislative requirements of being an integrated component of a Metropolitan Planning Organization's planning process in which a systematic progression of activities to analyze and address regional congestion is integrated in the RTP and FTIP processes. StanCOG's CMP network encompasses state routes and principal arterials within the county.

The CMP is reflected in the 2014 RTP/SCS, as described by StanCOG:

StanCOG prepared a comprehensive CMP update in 2010 for the development of the 2011 RTP and will prepare a similar update to the CMP prior to the next RTP planning cycle. As an interim step, several key components of the CMP update were performed and are reflected in the 2014 RTP/SCS. These include updating the ADT LOS thresholds to reflect the 2010 Highway Capacity Manual (the 2010 CMP is based on the previous manual) and application of the StanCOG's new MIP travel demand model (the 2010 CMP is based on StanCOG's predecessor model). Future roadway capital improvement projects identified in the Tier I (financially constrained) and Tier II (financially unconstrained) of the 2014 RTP/SCS were determined to still support identified CMP congestion relief needs. (Stanislaus Council of Governments 2014.)

Regional Transportation Impact Fee

Development in the county is subject to the county Regional Transportation Impact Fee (RTIF). The RTIF is part of the public facility fee structure, collected for Public Works projects. RTIF projects are currently planned and programmed through StanCOG. The proceeds of the RTIF are used to fund road improvements to meet future road demand. Regular updates of this fee have occurred, with the last in 2010.

The RTIF program is currently being updated, with July 1, 2017 being the target date for completion. The update is expected to revise the fee amount, revise the list of regional projects funded by the fee, and result in a new agreement between the county and cities.

Local

Stanislaus County Public Facilities Fees

The county collects Public Facilities Fees (PFFs) from new development to pay for a variety of capital facilities needed to serve the demands of new development. These include facilities for animal services, jails, libraries, and parks.

Stanislaus County General Plan

The adopted Stanislaus County General Plan contains goals, policies, and implementation measures related to transportation and circulation, as described below.

Land Use Element

GOAL FOUR. Ensure that an effective level of public service is provided in unincorporated areas.

POLICY TWENTY-THREE. New development shall pay its fair share of the cost of cumulative impacts on circulation and transit systems.

IMPLEMENTATION MEASURES

1. Benefit assessment districts or other similar districts shall be formed as needed to pay for the cost of providing ongoing appropriate transportation services.
2. Traffic impacts shall be identified and impact mitigation fees shall be paid by the subdivider and/or developer.
3. The level of service (LOS) for all roadways and intersections shall be at least a “C” level, unless they are located within the sphere of influence of a city that has adopted a lower level of service.
4. Applicants for General Plan amendments shall coordinate with the Stanislaus Council of Governments (StanCOG) Congestion Management Program to mitigate traffic impacts.

Community Plans

Denair Community Plan

GOAL THREE. Provide for the non-motorized transportation needs of the Denair Community.

POLICY ONE. Provide safe and convenient pedestrian and bicycle facilities to various destinations throughout the Community of Denair.

POLICY TWO. Provide pedestrian and bicycle facilities that link community residents to schools, parks, civic facilities and the community’s downtown core in accordance with the Denair Community Plan diagram.

POLICY THREE. The Community pedestrian and bicycle facilities shall connect to regional pedestrian and bicycle facilities.

Keyes Community Plan

GOAL 5. Provide an interconnected system of streets and roads to distribute traffic and meet the circulation needs of the Community.

POLICY ONE. The County should promote development of a traditional grid circulation system that distributes traffic, provides connectivity and offers multiple-route choices for motorists, as portrayed on the Keyes Community Plan Diagram.

POLICY TWO. Open street patterns that create a network of circulation connections with multiple points of ingress and egress are encouraged.

POLICY THREE. All roadways shall be designed to complement the urban development pattern and coordinate with pedestrian, bicycle and transit routes.

GOAL 6. Provide for the non-motorized transportation needs of the Keyes Community.

POLICY ONE. Provide safe and convenient pedestrian and bicycle facilities to various destinations throughout the community of Keyes.

POLICY TWO. Provide pedestrian and bicycle facilities that link community residents to schools, parks, civic facilities and the community's retail centers in accordance with the Keyes Community Plan diagram.

POLICY THREE. Community bicycle facilities shall connect to regional bicycle facilities.

Circulation Element¹

GOAL ONE. Provide a system of roads and roads throughout the County that meets land use needs.

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.

POLICY TWO. Circulation systems shall be designed and maintained to promote safety and minimize traffic congestion.

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.

POLICY FOUR. The circulation system shall provide for roads 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 levels of service based on anticipated land use.

POLICY FIVE. Transportation requirements of commercial and industrial development shall be considered in all planning, design, construction, and improvements.

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 trips by encouraging the use of alternatives to the single occupant vehicle.

POLICY SEVEN. Bikeways and pedestrian facilities shall be designed to provide 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.

POLICY EIGHT. Promote public transit as a viable transportation choice.

GOAL THREE. Maintain a balanced and efficient transportation system that facilitates inter-city and interregional travel and goods movement.

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

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.

¹ This element has extensive implementation measures relating to transportation. In the interest of brevity, only the goals and policies are printed here. The current circulation element can be viewed at the office of the County Planning and Community Development Department at 1010 Tenth Street in Modesto or online at: <http://www.stancounty.com/planning/pl/gp/gp-chapter2.pdf>.

Existing Conditions

An efficient, integrated transportation system is essential to maintaining the quality of life and facilitating the economic growth within Stanislaus County. Over the past few decades, the county has been able to sustain its growth and growth in adjacent communities without extensive expansion of county roads and state highways, as 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, particularly in and around the more urbanized areas. In addition, roughly one-fifth of the workers living in Stanislaus County commute to jobs outside the county each day, placing greater demand on freeways, county roads, and bridges that provide access to adjacent counties (U.S. Bureau of the Census 2013).

According to the 2010 U.S. Census, about 89% of unincorporated county residents traveled from home to work by automobile, 12% of which traveled in a carpool of two or more persons. Active transportation modes to work accounted for approximately 3% of commute travel, while transit accounted for less than 1%. Approximately 6% of unincorporated county residents worked from home (American Fact Finder 2015).

Roadway Network

The roadway network within the unincorporated parts of the county is a grid-based system of rural two-lane roads that connects individual communities and provides access to agricultural fields. Urban development is mainly concentrated in the central and western portions of the county within the incorporated cities of Modesto, Ceres, Turlock, Riverbank, Oakdale, Hughson, Waterford, Patterson, and Newman.

I-5 and SR 99 are the primary transportation corridors extending through the county and serve all of the county's major population centers. Other state highways, county arterials, and a network of local public and private roads constitute the remainder of the roadway system. The roadway network anticipated by 2035 as shown according to operational classification described in the General Plan, is shown on Figure 3.16-1.

I-5 is a four-lane freeway facility that runs along the western side of Stanislaus County and the San Joaquin Valley. It runs entirely in the unincorporated county with interchanges that provide access to the cities and communities in western Stanislaus County, including the cities of Newman and Patterson and the unincorporated communities of Westley, Grayson, and Crows Landing. I-5 is a major federal interstate freeway that extends from the Canadian border to Mexico.

SR 99 is a six-lane freeway facility in Stanislaus County that connects the largest urban areas in the county to other metropolitan areas in the San Joaquin Valley. The three largest cities in the county (Modesto, Turlock, and Ceres) are located on the SR 99 corridor, along with the unincorporated communities of Keyes and Salida. These cities and communities account for approximately two-thirds of the county's total population.

The multi-lane state highways in the county include seven state highways: SR 4, SR 33, SR 108, SR 120, SR 132, SR 165, and SR 219. These highways typically intersect other roadways at grade, do not provide median barriers, and do not have limited access.

- **SR 4** is a two-lane east-west facility that runs through the northeastern part of the county. It is primarily a commute and recreational route for traffic traveling to and from communities in Calaveras County and the Sierra Nevada.
- **SR 33** is a two-lane north-south highway that parallels I-5 on the western side of the county. SR 33 travels through the cities of Newman and Patterson and the unincorporated communities of Crows Landing and Westley.
- **SR 108** is a primarily east-west highway that travels through the center of the cities of Modesto, Riverbank, and Oakdale. Its junction with SR 99 in central Modesto is its current western terminus. To the east, SR 108 continues towards Sonora in Tuolumne County and the recreational areas of Stanislaus National Forest.
- **SR 120** runs east-west through the city of Oakdale and near the unincorporated community of Knights Landing in the northeastern part of the county. It is a major recreational route for traffic traveling to and from Yosemite National Park and the adjacent Sierra Nevada areas. It is co-signed with SR 108 between Oakdale and west of Chinese Camp in Tuolumne County.
- **SR 132** is one of the primary east-west routes in the county, traveling the width of the county from I-580 and I-5 just west of the San Joaquin County line to Coulterville in Mariposa County. SR 132 passes through downtown Modesto, Empire, Waterford, and La Grange.
- **SR 165** is a north-south facility located in the southern portion of the county between the Merced County line and SR 99 in Turlock.
- **SR 219** begins at an interchange with SR 99 in Salida, and extends to the east as Kiernan Avenue. The eastern end of SR 219 is at SR 108 in Stanislaus County, due north of Modesto.

A number of arterial and major roadways in Stanislaus County also provide for regional travel and connections between the incorporated cities and unincorporated communities within the county. Most of these are signed county J-Routes, and include Santa Fe Avenue (county Route J7), Geer/Albers Road (J14), Howard/Grayson Road (J16), Keyes Road (J16), West Main Street/Las Palmas Avenue (J17), Crows Landing Road, and a portion of McHenry Avenue (J6).

Traffic Operations

The analysis of traffic operations was conducted based on roadway segments representative of the county's overall transportation network. Traffic volumes on roadway segments are used to determine the overall usage and congestion. Note that the roadway segment analysis is based on traffic counts taken at a single location or link, which is intended to be representative of the entire segment. A link connects two intersections; a segment is a series of links. The segments used in this analysis were developed based on where a series of links had common physical and traffic conditions.

Traffic operations on the study roadway segments were measured using a qualitative measure called Level of Service (LOS). LOS is a general measure of traffic operating conditions whereby a letter grade, from A (free-flow) to F (over-capacity), is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving, as well as speed, travel time, traffic interruptions, and freedom to maneuver. The LOS grades are generally defined as follows:

- **LOS A** represents free-flow travel with an excellent level of comfort and convenience and the freedom to maneuver.

- **LOS B** has stable operating conditions, but the presence of other road users causes a noticeable, though slight, reduction in comfort, convenience, and maneuvering freedom.
- **LOS C** has stable operating conditions, but the operation of individual users is substantially affected by the interaction with others in the traffic stream. LOS C is the desired level of operations for vehicles on roadways within the unincorporated county.
- **LOS D** represents high-density but stable flow. Users may experience restriction in speed and freedom to maneuver, with poor levels of comfort and convenience.
- **LOS E** represents operating conditions at or near capacity. Speeds are reduced to a low but relatively uniform value. Freedom to maneuver is difficult, with users experiencing frustration and poor comfort and convenience. Unstable operation is frequent, and minor disturbances in traffic flow can cause breakdown conditions.
- **LOS F** is used to define forced or breakdown conditions. This condition exists wherever the volume of traffic exceeds the capacity of the roadway. Long queues can form behind these bottleneck points, with queued traffic traveling in a stop-and-go fashion.

LOS was calculated for each roadway segment in the regional roadway system to evaluate traffic conditions for the base year and 2035 forecast conditions. LOS was determined by comparing traffic volumes for selected roadway segments with peak-hour LOS capacity thresholds. These thresholds are shown in Table 3.16-1 and were calculated based on the methodology contained in the Highway Capacity Manual (HCM) (Transportation Research Board 2010). The HCM methodology is the prevailing measurement standard used throughout the United States. The existing daily LOS results are shown graphically for the regional roadway system on Figure 3.16-2. LOS is calculated using existing traffic count data where available, including counts from the county and city Public Works Departments, Caltrans, and model estimated volumes for locations without existing counts.

Table 3.16-1. Roadway Segment Level of Service Criteria

Roadway Capacity Class	Level of Service Thresholds (vehicles/per day/per lane)				
	A	B	C	D	E
4 Lane Freeway	5,760	9,180	13,500	16,650	18,000
6+ Lane Freeway	5,400	8,820	12,780	15,840	18,000
Principal Arterial	4,500	7,500	10,500	12,600	15,000
Other Principal Arterial	3,750	6,250	8,750	10,500	12,500
4+ Minor Arterial	3,000	5,000	7,000	8,400	10,000
2 Lane Arterial	700	1,900	3,400	5,900	10,000
4 Lane Major Collector	2,520	4,230	5,940	7,110	9,000
2 Lane Major Collector	700	1,900	3,400	5,900	10,000
2 Lane Minor Collector	350	950	1,700	2,950	5,000

Source: Stanislaus County General Plan Circulation Element.

Note: Daily level of service thresholds do not necessarily reflect the added capacity that is provided at intersections to accommodate turn movements.

This traditional methodology used to analyze the roadway system does not consider the potential impact on agricultural roadway users, walking, bicycling, and transit. Pedestrians, bicyclists, and transit riders are all users of the roadway system, but may not be fully recognized in the traffic

operations analysis and the calculation of LOS. The LOS thresholds in Table 3.16-1 are based on driver's comfort and convenience. Identifying the need for roadway improvements based on the resulting roadway LOS can have unintended impacts on other modes, such as increasing the walking distance for pedestrians. In evaluating the roadway system, a lower vehicle LOS may be desired when balanced against other community values related to resource protection, social equity, economic development, and consideration of pedestrians, bicyclists, and transit users.

Most roadways within the county currently operate at LOS C or better on a daily basis, which represents stable conditions for vehicle operations. However, some facilities operate at or near capacity, including portions of SR 99 (through Modesto), SR 108 (near Oakdale), SR 120 (near Oakdale), and SR 132 (near Modesto).

Traffic Safety

The recent accident history for Stanislaus County roadways was reviewed to identify locations with high accident rates. Accident data are used to determine locations where the combination of physical geometrics, traffic controls, and driver behavior may contribute to a safety problem. Many city and county agencies use accident data to determine necessary roadway or intersection modifications to improve traffic safety. In some cases, accidents are caused by driver behavior and cannot be corrected solely by safety improvements.

Data were obtained from the California Statewide Integrated Traffic Records System, as summarized by the University of California, Berkeley Transportation Injury Mapping System and reflective of 2010 to 2012 data. Figure 3.16-3 shows the collision density throughout the county as well as the locations of fatal accidents.

Of the 2,315 reported collisions in unincorporated Stanislaus County between 2010 and 2012, 38% of collisions occurred on the state highway system. Approximately 7% of collisions involved a pedestrian or bicyclist, and 8% involved a truck. The primary collision factors were improper turning or right-of-way related (40%), unsafe speed (25%), and driving under the influence (14%). The most common types of collisions were rear-end (26%), hit-object (22%), and broadside (22%). There were 82 fatal accidents within the unincorporated county between 2010 and 2012 (University of California, Berkeley 2015).

Public Transportation

Public transportation in Stanislaus County consists of bus and rail transit, taxis, and park-and-ride lots that support the formation of carpools and vanpools.

The Stanislaus County Public Works Transit Division is the administrator for the county's intercity public transportation system, called Stanislaus Regional Transit or StaRT. StaRT provides service to 16 cities and communities in Stanislaus County and the cities of Merced and Gustine in Merced County. StaRT operates fixed route, deviated fixed route, intra- and intercity curb-to-curb dial-a-ride transportation services, and provides non-emergency medical transportation to Bay Area medical facilities.

Being the intercity operator, StaRT has connectivity with local transit operators and has transfer points within various cities, including Patterson, Turlock, Ceres, Modesto, Riverbank, and Oakdale. This enables county residents to connect between intracity and intercity transit so they can travel throughout the county. Transit services are supported through the construction and operation of

bus facilities, including shelters, benches, and stop signs. Less than 1% of employed residents in the unincorporated area used transit for their commute trips (U.S. Bureau of the Census 2013).

Commercial bus service is provided by Greyhound, which serves over 3,600 service locations within North America. Greyhound provides service to Stanislaus County with a stop in Modesto.

Taxi services are provided by several local companies primarily located in Modesto, Ceres, Turlock, and Oakdale, and are available on demand or by reservation.

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 intercity bus service offered by the MAX ACE service. Depending on the destination, Amtrak service may be accessed locally at the Amtrak station on Parker Road in Modesto, or Santa Fe Avenue in Denair, or by traveling to stations in the city of Stockton.

Park-and-ride lots provide a place for commuters in single-occupant vehicles to transfer to public transit or carpools. Stanislaus County has four park-and-ride facilities along the SR 99 corridor, with three in Modesto and one in Turlock.

Bicycle and Pedestrian Circulation

Stanislaus County offers excellent conditions for bicycle and pedestrian transportation. The county is generally flat and has a temperate climate, and major destinations are within an easy ride of most residences. According to the 2010 Census, approximately 3% of workers reported that they used a form of active transportation for their commute trips (U.S. Bureau of the Census 2013). However, 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 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 except minor roads. Marked and/or signed bicycle lanes and paths are provided in accordance with the Regional Bicycle Action 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. (Stanislaus Council of Governments 2013)

Rail/Highway Freight

Railroad operations in Stanislaus County include high speed mainline operations on the Burlington Northern and Santa Fe (BNSF) Railway and Union Pacific Railroad (UPRR) and low speed 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 mainline, which passes through Salida, Modesto, Ceres, Keyes, and Turlock. The UPRR also operates on the California Northern Railroad line on the western 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 UPRR and BNSF 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 that connects switching operations between the UPRR in Modesto and the BNSF 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 UPRR. 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. This line is mostly abandoned.

I-5 and SR 99 are included in the National Network for Service Transportation Assistance Act of 1982 (STAA). The STAA allows large trucks, commonly referred to as STAA trucks, to operate on routes that are part of the National Network. STAA trucks are larger than those allowed on other California highways and are defined in Part 268, Title 23, of the Code of Federal Regulations. SR 4, SR 33, SR 120, SR 132, and SR 219 are designated Terminal Access STAA Routes and also accommodate STAA trucks where so indicated on the road. SR 132 from SR 99 to La Grange Road is a designated California Legal Advisory Route where only California legal trucks are allowed.

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 three major facilities in the county, only two of which are presently active: (1) Modesto City-County Airport (Harry Sham Field); (2) Oakdale Municipal Airport; and (3) Crows Landing Air Facility (inactive). 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.

3.16.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan update; discusses the individual impacts relative to the thresholds of significance; discusses mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and indicates the overall significance of the impact with mitigation incorporated.

Major Sources Used in Analysis

The major sources used in this analysis are listed below:

- StanCOG June 2014 RTP/SCS
- StanCOG Three County Travel Demand Model

- Draft 2035 Stanislaus County General Plan
- StanCOG NMTP, 2013

Approach and Methodology

The transportation analysis for the roadway system followed the methodology described below. For other components of the transportation system, the policy framework and implementation program for the General Plan update were evaluated against the significance criteria.

Transportation Analysis Methodology

The Three-County Model travel demand model (TCM), recently updated as part of the San Joaquin Valley Model Improvement Project and used in the evaluation of the StanCOG 2014 RTP/SCS, was used to forecast daily roadway segment volumes and estimate VMT in the study area. The model was validated to 2008 conditions and forecasts 2014, 2035, and 2040 conditions. The model serves as a tool to implement, manage, and monitor Stanislaus County's plans, projects, and programs and evaluate the potential impacts on the transportation system by proposed land use development.

The following provides a summary of the overall process; detailed model information is provided in Appendix C-1.

Land use inputs for the unincorporated county and incorporated cities from the StanCOG model were reviewed with county staff for reasonableness. This version of the StanCOG model includes the adjacent counties of San Joaquin and Merced. For the incorporated cities in Stanislaus County and counties outside of Stanislaus County, the land use estimates developed by StanCOG were used.

The 2035 land use for unincorporated Stanislaus County was developed based on the assumptions within the StanCOG model, and adjusted to reflect planned land use changes, such as those contemplated around the Crows Landing Airport and other development projects, that are not part of the General Plan Update.

Planned roadway network improvements in the model area were also reviewed and compared to the 2014 RTP/SCS. The base year model and future year model were compared against recent roadway improvements as well as the StanCOG Tier I planned improvements, including the proposed North County Corridor and the Faith Home Road expressway.

Two scenarios were modeled: base year (existing) conditions and 2035 conditions under the General Plan as it is proposed to be amended. The model was used to replicate existing conditions and develop future daily roadway volumes. Volumes were projected using the 2035 land use and roadway network details. Where existing counts are available, the difference between the base year model and the 2035 model was added to the existing traffic count to develop 2035 daily roadway segment forecasts, as detailed in Table 3.16-2. The base year shown in Table 3.16-2 is reflective of 2014 conditions, while the General Plan 2035 year reflects expected conditions in 2035. For roadways where existing counts were not available, the unadjusted model volume was used. Only roadways where existing count data is available are included in Table 3.16-2.

Table 3.16-2. Base Year and Future Roadway Volumes and Levels of Service

No.	Facility			Scenario			
	Roadway	Cross Street 1	Cross Street 2	Volume	LOS	Volume	LOS
1	26 Mile R	Carter Rd	Eastman Rd	1,500	A	3,200	A
2	26 Mile R	Dunn Ranch Rd	Gilbert Rd	2,300	A	3,200	A
3	9th St	E St	D St	15,900	B	15,200	B
4	August Rd	Prairie Flower Road	Mitchell Road	1,300	A	4,100	A
5	Bacon	Hammett Rd	Toomes Rd	1,000	A	1,900	A
6	Bacon	Hammett Rd	Williams Rd	1,400	A	2,600	A
7	Bacon Rd	Jackson Rd	Hart Rd	800	A	1,400	A
8	Beckwith	Hart Rd	Hammett Rd	3,600	A	4,000	A
9	Beckwith	Finney Rd	Toomes Rd	3,800	A	5,100	A
10	Beckwith Rd	Jackson Rd	Hart Rd	2,100	A	2,600	A
11	Berkeley Ave	Ramson Dr	Paulson Rd	6,100	C	8,500	D
12	Blue Gum Ave	Morse Rd	Dakota Ave	2,700	A	3,000	A
13	Bradbury Rd	Morgan Rd	Crows Landing Rd	1,300	A	4,800	A
14	Bradbury Rd	Blaker Rd	Central Ave	1,800	A	5,200	A
15	Bradbury Rd	Walnut Rd	Soderquist Rd	2,100	A	5,400	A
16	Bradbury Rd	Commons Rd	Washington Rd	2,600	A	5,900	A
17	Bradbury Rd	Tegner Rd	Walnut Rd	2,600	A	6,000	A
18	Brier Rd	Berkeley Ave	Johnson Rd	1,400	B	4,100	C
19	Carpenter Rd	Ruble Rd	Crows Landing Rd	1,500	A	2,600	A
20	Carpenter Rd	Fulkerth Rd	Monte Vista Ave	5,300	A	7,400	A
21	Carpenter Rd	Service Rd	Redwood Rd	6,900	A	9,100	B
22	Central Ave	Hilmar Rd	Bradbury Rd	1,500	A	1,500	A
23	Central Ave	Linwood Ave	Main St	1,500	A	1,500	A
24	Central Ave	Tuolumne Rd	Monte Vista Rd	1,600	A	2,600	A
25	Church St	Milnes Rd	Parker Rd	2,800	A	3,100	A
26	Claribel	Albers Rd	Oakdale Waterford Hwy	1,700	A	1,900	A
27	Claribel	Bentley Rd	Albers Rd	5,800	A	6,400	A
28	Claribel	Langworth	Eleanor Ave	6,500	A	6,500	A
29	Crows Lan	Clausen Rd	Harding Rd	5,000	A	14,000	A
30	Crows Landing Rd	Canal Rd	FULKERTH	5,200	A	10,400	B
31	Crows Landing Rd	Bradbury Rd	Ehrlich Rd	5,700	A	18,200	A
32	Del Puerto Canyon Rd	Diablo Grande Pky	West of Del Puerto Canyon	5,500	A	22,500	B
33	E Keyes R	Hickman Rd	Merriam Rd	1,800	A	2,300	A
34	E Keyes R	Geer Rd	Berkeley Ave	2,700	A	2,900	A
35	E Keyes R	Crows Landing Rd	Ustick Rd	4,300	A	5,400	A
36	E Keyes R	Central Ave	Moffett Rd	4,700	A	6,000	A
37	E Keyes R	Pioneer Rd	Mountain View Rd	6,300	A	6,700	A
38	E Marshal	SR 33	Pomegranate Ave	1,900	A	8,600	A
39	E Monte V	Santa Fe Ave	Vincent Rd	1,600	A	1,900	A

No.	Facility			Scenario			
	Roadway	Cross Street 1	Cross Street 2	Volume	LOS	Volume	LOS
40	E Whitmore	Lockwood Rd	Washington Rd	5,800	A	6,900	A
41	East	Johnson Rd	Oleander Ln	6,500	C	15,700	B
42	East Ave	Santa Fe Dr	Hickman Rd	2,600	A	3,200	A
43	East Ave	Verduga Rd	Daubenberger Rd	3,400	A	4,800	A
44	East Ave	Quincy Rd	Johnson Rd	4,200	A	11,400	A
45	Emerald Ave	Lone Palm Ave	Kansas Ave	5,400	B	5,900	C
46	Faith Home Rd	Tuolumne Rd	Monte Vista Rd	1,800	A	2,900	A
47	Faith Home Rd	CR-J17	Clayton Rd	1,400	A	3,300	A
48	Faith Home Rd	Keyes Rd	Barnhart Rd	1,900	A	3,300	A
49	Faith Home Rd	Main St	Fulkerth Rd	1,800	A	4,000	A
50	Faith Home Rd	Keyes Rd	Kaiser Rd	1,100	A	6,800	A
51	Faith Home Rd	Don Pedro Rd	Service Rd	2,300	A	10,100	A
52	Faith Home Rd	Whitmore Ave	Roeding Rd	2,400	A	11,600	A
53	Finch Rd	Garner Rd	Codoni Ave	2,500	A	5,300	A
54	Fink Rd	Ward Ave	Davis Rd	1,700	A	2,100	A
55	Fink Rd	Bell Rd	Medlin Rd	1,800	A	3,600	A
56	Finney Rd	Beckwith Rd	North Ave	1,100	A	1,400	A
57	Finney Rd	Covert Rd	Adams Ave	1,900	B	1,900	B
58	Fulkerth	Central Ave	Moffett Rd	1,900	A	4,200	A
59	Fulkerth	Crows Landing Rd	Bystrum Rd	1,900	A	4,300	A
60	Fulkerth	Prairie Flower Rd	Faith Home Rd	2,600	A	5,000	A
61	Fulkerth	Washington Rd	Commons Rd	3,400	A	7,100	A
62	Garner Rd	Leckron Rd	Finch Rd	7,800	A	15,700	C
63	Geer Rd	Santa Fe Ave	Grayson Rd	10,800	B	10,900	B
64	Geer Rd	Keyes Rd	Barnhart Rd	11,100	B	11,300	B
65	Golden State Blvd	Nunes Rd	Keyes Rd	3,600	A	7,100	A
66	Golf Rd	Glenwood Ave	Linwood Ave	2,500	A	3,700	A
67	Gratton R	Keyes Rd	Barnhart Rd	1,600	A	2,000	A
68	Hammett	Covert Rd	Bacon Rd	1,900	A	2,500	A
69	Harding Rd	Commons Rd	Faith Home Rd	400	A	1,700	A
70	Hart Rd	California Ave	Maza Blvd	2,700	A	3,100	A
71	Hart Rd	California Ave	Paradise Rd	2,600	A	3,200	A
72	Hawkeye Ave	Verduga Rd	Waring Rd	1,800	A	2,100	A
73	Herndon Rd	River Rd	Sorona Ave	3,900	C	4,300	C
74	Hickman R	Delaware Rd	Lake Rd	6,000	A	7,500	A
75	Hickman Rd	Monte Vista Ave	Taylor Rd	2,300	A	2,500	A
76	Hills Ferry Rd	Stuhr Rd	River Rd	5,700	A	8,700	A
77	I-5	Davis Rd	Stuhr Rd	38,100	C	47,700	C
78	I-5	Fink Rd	Davis Rd	38,100	C	47,700	C
79	I-5	Diablo Grande Pky	Oak Flat Rd	38,800	C	47,800	C
80	I-5	Gaffery Rd	Ingram Creek Rd	41,800	C	52,000	C

No.	Facility			Scenario			
				Base Year		2035	
	Roadway	Cross Street 1	Cross Street 2	Volume	LOS	Volume	LOS
81	I-5	Ingram Creek Rd	Diablo Grande Pky	43,900	C	55,000	D
82	Jeffrey Dr	Sylvan Ave	Carl Way	1,400	A	2,500	A
83	Jennings Rd	Service Rd	Grayson Rd	900	A	3,100	A
84	Jennings Rd	Keyes Rd	Grayson Rd	2,800	A	5,000	A
85	Jennings Rd	Keyes Rd	Barnhart Rd	2,900	A	5,500	A
86	Johnson Rd	Merritt St	East Ave	3,500	B	3,900	B
87	Johnson Rd	East Ave	Evelle Ln	2,900	B	5,200	B
88	Keyes Rd	Blaker Rd	Central Ave	4,800	A	6,100	A
89	Kiernan	Stratos Way	SR 108	16,400	C	26,100	B
90	Kiernan	CR 99 Off Ramp	CR 99 On Ramp	33,800	F	41,400	C
91	Langworth Rd	Mesa Dr	Patterson Rd	1,800	A	2,000	A
92	Langworth Rd	Milnes Rd	Rice Rd	2,200	A	2,400	A
93	Lester Rd	Hawkeye Ave	Tuolumne Rd	1,700	A	2,200	A
94	Linwood Ave	Paulson Rd	Johnson Rd	1,200	A	5,900	A
95	Main St	Kern St	Fresno Ave	6,000	A	6,700	A
96	Mariposa Rd	Farrar Ave	Finch Rd	2,800	B	3,100	B
97	Maze	Carpenter Rd	Rosemore Ave	14,000	B	15,400	C
98	Maze	Carpenter Rd	Meadow Ln	13,100	B	14,400	B
99	Maze Blvd	Hart Rd	Texas Ave	14,500	B	16,800	C
100	Maze Blvd	McCracken Rd	Kasson Rd	19,000	C	23,700	D
101	McCracken Rd	Gaffery Rd	Spencer Rd	900	A	2,900	A
102	Milnes	Santa Fe Ave	Dewitt Rd	4,600	A	5,400	A
103	Milnes	Church St	Langworth Rd	5,800	A	6,300	A
104	Milton Ro	Dunton Rd	Sonora Rd	1,200	A	2,200	A
105	Mitchell	Harding Rd	Bradbury Rd	1,000	A	2,100	A
106	Mitchell	Clayton Rd	Linwood Ave	1,400	A	2,700	A
107	Mitchell	Hilmar Rd	August Rd	1,400	A	3,700	A
108	Mitchell	August Rd	Williams Ave	1,900	A	4,700	A
109	Morgan Rd	Grayson Rd	Keyes Rd	1,800	A	2,200	A
110	Motsinger Rd	Faith Home Rd	Anna Ave	1,700	B	3,700	B
111	N Santa F	Monte Vista Ave	Vincent Rd	2,100	A	2,700	A
112	N Santa F	Keyes Rd	Barnhart Rd	3,300	A	4,000	A
113	OAKDALE W	Claribel Rd	Rice Rd	3,400	A	5,400	A
114	Oakdale W	Ellenwood Rd	Milnes Rd	5,700	A	8,400	A
115	Orange Bl	Wamble Rd	Lancaster Rd	2,600	A	3,900	A
116	Orange Bl	Rodden Rd	Olive Ave	2,100	B	4,200	C
117	Orange Blossom Rd	Stone Ave	Sonora Rd	1,100	A	3,300	A
118	Paradise	Michigan Ave	Pauline Ave	3,900	A	6,400	A
119	Paradise	Shiloh Rd	Hart Rd	4,500	A	8,100	A
120	Parker Rd	Wellsford Rd	Church St	3,200	A	3,600	A
121	Paulson Rd	Linwood Ave	Daubenberger Rd	2,000	A	4,400	A

No.	Facility			Scenario			
	Roadway	Cross Street 1	Cross Street 2	Volume	LOS	Volume	LOS
122	Pioneer R	Redwood	Grayson Rd	1,200	A	1,300	A
123	Pioneer R	Keyes Rd	Grayson Rd	1,400	A	1,500	A
124	Quincy Rd	Monte Vista Ave	Valdosta Dr	2,700	B	3,400	B
125	Redwood	Central Ave	Moffett Rd	400	A	3,700	A
126	Riverside Dr	Lapham Dr	Nathan Ave	3,900	A	4,300	A
127	Roselle	Sylvan Ave	Plainview Rd	7,100	A	20,000	B
128	Rosemore Ave	Kansas Ave	Elm Ave	2,300	A	2,400	A
129	Rouse Ave	Alturas Ave	Leon Ave	3,600	B	3,700	B
130	Santa Fe	Service Rd	7th St	6,000	A	7,500	A
131	Santa Fe	Hatch Rd	Leedom Rd	7,700	A	7,900	A
132	Santa Fe Ave	Geer Rd	Redwood Rd	2,600	A	4,200	A
133	Santa Fe Dr	East Ave	Linwood Ave	2,300	A	2,900	A
134	Service Rd	Carpenter Rd	Ustick Rd	1,800	A	1,800	A
135	Service Rd	Mountain View Rd	Tully Rd	1,900	A	2,500	A
136	Service Rd	Ustick Rd	Crows Landing Rd	1,600	A	2,500	A
137	Service Rd	Griffin Rd	Santa Fe Ave	1,900	A	2,600	A
138	Service Rd	Washington Rd	Pioneer Rd	2,100	A	2,700	A
139	Service Rd	Sanders Rd	Vivian Rd	1,000	A	3,100	A
140	Service Rd	Esmar Rd	Faith Home Rd	3,700	A	4,600	A
141	Shoemake	Dakota Ave	Finney Rd	1,400	A	1,700	A
142	Shoemake	Hart Rd	Edsel Ln	700	A	2,200	A
143	Shoemake	Gates Rd	Dunn Rd	900	A	2,500	A
144	Sierra Rd	Laughlin Rd	Wamble Rd	1,100	A	1,200	A
145	Sierra Rd	Stearns Rd	Orsi Rd	3,800	C	4,300	A
146	Sisk Rd	Wallasey Way	Wessex Ln	10,300	B	21,200	D
147	SR 108	St Francis Ave	Ladd Rd	20,000	C	23,300	D
148	SR 108	SR 219	Charity Way	22,700	D	26,200	A
149	SR 120	Sawyer Ave	Walnut Ave	13,700	B	17,600	C
150	SR 120	Pioneer Ave	Sawyer Ave	13,700	B	17,700	C
151	SR 120	Wamble Rd	Orange Blossom Rd	15,600	C	22,100	A
152	SR 120	Dillwood Rd	Orange Blossom Rd	22,600	D	30,400	B
153	SR 120	26 Mile Rd	Rodden Rd	28,500	E	33,600	F
154	SR 120	Rodden Rd	North St	28,200	E	33,700	F
155	SR 33	SR 132	Welty Rd	2,100	A	8,100	A
156	SR 33	D St	E St	3,500	A	10,000	B
157	SR 33	B St	Grayson Rd	4,600	A	12,100	B
158	SR 33	Fruit Ave	Baldwin Rd	5,000	A	12,200	B
159	SR 33	Mulberry Ave	Baldwin Rd	4,600	A	13,600	B
160	SR 33	Eucalyptus Ave	Olive Ave	6,100	A	14,900	B
161	SR 33	I St	El Circulo Ave	7,200	A	15,000	B
162	SR 33	5th St	6th St	5,300	A	15,200	C

Facility				Scenario			
				Base Year		2035	
No.	Roadway	Cross Street 1	Cross Street 2	Volume	LOS	Volume	LOS
163	SR 33	5th St	4th St	5,500	A	15,300	C
164	SR 33	Inyo Ave	Sanches Rd	8,500	A	15,300	C
165	SR 33	Lundy Rd	Stuhr Rd	6,500	A	15,300	C
166	SR 33	4th St	Ike Crow Rd	5,900	A	15,800	C
167	SR 33	J T Crow Rd	Anderson Rd	6,800	A	15,800	C
168	SR 33	Eastin Rd	J T Crow Rd	7,100	A	16,000	C
169	SR 33	Stanislaus St	Inyo Ave	8,800	A	16,300	B
170	SR 33	6th St	Fink Rd	7,600	A	16,800	C
171	SR 33	Sperry Ave	C St	7,300	A	16,900	B
172	SR 33	El Circulo Ave	E St	8,700	A	18,500	B
173	SR 33	Las Palmas Ave	Salado Ave	10,100	A	19,700	B
174	SR 33	Poppy Ave	Sperry Ave	8,400	A	20,100	C
175	SR 33	Merced St	Kern St	9,900	B	19,300	B
176	SR 33	Mariposa St	Kern St	9,700	B	20,300	C
177	SR 4	Milton Rd	Waverly Rd	7,400	A	13,300	B
178	SR 99	Golf Rd	Griffith Ave	54,400	C	69,500	C
179	SR 99	Lander Ave	Golf Rd	54,400	C	69,500	C
180	SR 99	Linwood Ave	Lander Ave	69,500	C	86,500	F
181	SR 99	Monte Vista Ave	Taylor Rd	70,000	C	88,000	F
182	SR 99	Fulkerth Rd	Tuolumne Rd	76,100	C	90,000	F
183	SR 99	Canal Dr	Main St	78,900	D	93,900	D
184	SR 99	Keyes Rd	Taylor Rd	90,200	D	108,800	F
185	SR 99	Service Rd	Pine St	92,500	D	113,000	F
186	SR 99	Whitmore Ave	Pine St	92,600	D	113,700	F
187	SR 99	Service Rd	Mitchell Rd	99,900	E	119,600	F
188	SR 99	Hatch Rd	9th St	100,700	E	122,500	F
189	SR 99	Crows Landing Rd	9th St	100,200	E	122,900	F
190	SR 99	Hatch Rd	Whitmore Ave	101,800	E	123,000	F
191	SR 99	Faith Home Rd	Mitchell Rd	106,200	E	126,000	F
192	SR 99	Pelandale Ave	Beckwith Rd	107,000	E	127,500	E
193	SR 99	Crows Landing Rd	Zeff Rd	108,000	F	132,900	F
194	SR 99	Sierra Dr	Tuolumne Blvd	115,300	F	135,100	F
195	SR 99	Pelandale Ave	SR 219	109,700	F	136,900	E
196	SR 99	Hammett Rd	SR 219	112,100	F	143,600	F
197	SR 99	Kansas Ave	SR 132	123,000	F	144,500	F
198	SR 99	Beckwith Rd	Carpenter Rd	124,100	F	145,800	F
199	SR 99	Carpenter Rd	9th St	124,600	F	146,100	F
200	SR 99	Woodland Ave	9th St	124,600	F	146,100	F
201	Vivian Rd	Grayson Rd	Keyes Rd	1,600	A	4,300	A
202	Vivian Rd	Whitmore Ave	Hackett Rd	2,500	A	7,100	A
203	W Grayson	Morgan Rd	Blaker Rd	1,300	A	3,000	A

No.	Facility			Scenario			
	Roadway	Cross Street 1	Cross Street 2	Volume	LOS	Volume	LOS
204	W Grayson	Vivian Rd	Carpenter Rd	2,300	A	4,800	A
205	W Grayson	River Rd	SR 33	5,800	A	9,500	B
206	W Keyes R	Crows Landing Rd	Ustick Rd	2,300	A	3,300	A
207	W Monte V	Carpenter Rd	Vivian Rd	600	A	2,500	A
208	W Stuhr R	Bell Rd	Jorgensen Rd	1,300	A	2,300	A
209	W Stuhr R	I-5	Bell Rd	1,300	A	6,000	A
210	Ward Ave	Elfers Ave	Marshall Rd	1,500	A	7,900	A
211	Washington Rd	Idaho Rd	Bradbury Rd	1,400	A	1,700	A
212	Wellsford Rd	Garst Rd	Dusty Ln	1,000	A	1,500	A
213	Yosemite (SR 132)	Old La Grange Rd	SR 132	2,000	A	2,300	A
214	Yosemite (SR 132)	La Grange Rd	Old La Grange Rd	2,500	A	2,900	A
215	Yosemite (SR 132)	Crabtree Rd	Roberts Ferry Rd	3,000	A	3,200	A
216	Yosemite (SR 132)	La Grange Rd	Lake Rd	3,000	A	3,200	A
217	Yosemite (SR 132)	Lake Rd	Rushing Rd	3,000	A	3,200	A
218	Yosemite (SR 132)	Rushing Rd	Crabtree Rd	3,000	A	3,200	A
219	Yosemite (SR 132)	Rushing Rd	Crabtree Rd	3,000	A	3,200	A
220	Yosemite (SR 132)	Baker St	Appling Rd	5,600	A	7,000	A
221	Yosemite (SR 132)	Baker St	E St	5,900	C	8,300	D
222	Yosemite (SR 132)	H St	Root Rd	8,600	A	10,000	B
223	Yosemite (SR 132)	Lincoln Ave	Mariposa Rd	17,900	A	21,500	A
224	Yosemite (SR 132)	Santa Fe Ave	F St	9,800	B	11,500	B
225	Yosemite (SR 132)	Reinway Ave	Pasadena Ave	10,100	B	11,800	B
226	Yosemite (SR 132)	Triangle Ranch Rd	Albers Rd	9,800	B	11,900	B
227	Yosemite (SR 132)	Garner Rd	Creekwood Dr	16,000	B	19,600	B
228	Yosemite (SR 132)	Covena Ave	Santa Cruz Ave	19,900	B	24,100	C
229	Yosemite (SR 132)	El Vista Ave	Colfax Ave	20,400	B	24,500	B
230	Yosemite (SR 132)	G St	H ST	11,300	C	12,700	C
231	Yosemite (SR 132)	Parry Rd	Mitchell Rd	21,000	B	25,300	B
232	Yosemite (SR 132)	C St	E St	22,500	C	27,400	C
233	Yosemite (SR 132)	E St	SR 108	22,500	C	27,400	C
234	Yosemite (SR 132)	Covena Ave	Kerr Ave	24,500	C	29,200	D
235	Yosemite (SR 132)	A St	Santa Fe Ave	16,500	D	18,500	E
236	Yosemite (SR 132)	A St	B St	22,500	F	27,200	F
237	Yosemite (SR 132)	North St	A St	28,300	F	33,100	F
238	Yosemite Ave	B St	C St	22,500	C	27,300	C

Notes: There are no land use or circulation changes between the current General Plan and the General Plan update; therefore, the without project and with project analysis results are the same.

Thresholds of Significance

Based on State CEQA Guidelines Appendix G and Stanislaus County General Plan policies, the plan updates would have a significant impact with respect to transportation and traffic if it would:

- Result in increased VMT on a per capita basis.
- Result in traffic operations below LOS C for Stanislaus County roadways, which is the minimum acceptable threshold according to the current General Plan.
- Result in traffic operations below the minimum acceptable thresholds on roadways outside Stanislaus County's jurisdiction (i.e., Caltrans facilities or within city spheres of influence).
- Create demand for public transit unable to be met by planned services and facilities.
- Disrupt existing, or interfere with planned, transit services or facilities.
- Disrupt existing, or interfere with planned, bicycle or pedestrian facilities.
- Result in transportation network changes that would prevent the efficient movement of agricultural vehicles within the county.
- Result in a change in air traffic patterns, including an increase in traffic levels or a change in location that results in substantial safety risks.
- Create additional vehicle, bicycle, or pedestrian travel on roadways or other facilities that do not meet current county design standards.
- Substantially conflict with applicable plans, policies, and regulations of other agencies and jurisdictions where such conflict would result in an adverse physical change in the environment.
- Result in new policies that would result in significant adverse physical impacts as compared to the current General Plan policies.

Impacts and Mitigation Measures

The following section provides an evaluation and analysis for the potential impacts of the General Plan update for each of the criteria of significance described above. For the roadway system, the results of the analysis reflect 2035 conditions. As there are no land use or circulation network changes contemplated by the General Plan, the 2035 forecasted traffic volumes on roadway segments within the County are reflective of Without- and With-Project conditions. For the transit, bicycle, pedestrian, goods movement, and aviation systems, the analysis was limited to a review of the General Plan policy framework and implementation program associated with the draft General Plan update. If a potential inconsistency was identified, this was considered a significant impact.

During analysis of the potential impacts of the General Plan update, the following proposed substantive amendments to the goals, policies, and implementation measures of that plan were taken into consideration. The proposed amendments are shown in ~~strikeout~~ for deletions and underline for additions.

Land Use Element

GOAL FOUR. Ensure that an effective level of public service is provided in unincorporated areas.

POLICY TWENTY-THREE~~FIVE~~FIVE. New development shall pay its fair share of the cost of cumulative impacts on circulation and transit systems.

IMPLEMENTATION MEASURE

2. Traffic impacts not covered under Public Facility Fees shall be identified and impact mitigation fees shall be paid by the subdivider and/or developer.

GOAL SIX. Promote and protect healthy living environments.

POLICY TWENTY-NINE. Support the development of a built environment that is responsive to decreasing air and water pollution, reducing the consumption of natural resources and energy, increasing the reliability of local water supplies, and reduces vehicle miles traveled by facilitating alternative modes of transportation, and promoting active living (integration of physical activities, such as biking and walking, into everyday routines) opportunities.

IMPLEMENTATION MEASURE

1. County development standards shall be evaluated and revised, as necessary, to facilitate development incorporating the following (or similar) design features:
 - Alternative modes of transportation such as bicycle lanes, pedestrian paths, and facilities for public transit...

POLICY THIRTY. New development shall be designed to facilitate the efficient extension of public transportation systems.

IMPLEMENTATION MEASURE

1. Development proposals shall be referred to the appropriate transit authority to determine the types of facilities needing to be provided, if any.

Circulation Element

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 vehicle circulation exist, or will exist as part of the development, to adequately handle increased traffic and safety concerns.

IMPLEMENTATION MEASURES

3. ~~Developers~~ Applicants will construct or pay the cost of new roads, including non-motorized elements, necessary to serve the development of all land uses and to mitigate impacts to the existing roads caused by the development.
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, ~~traffic~~ transportation impact fees, and other funding mechanisms. The total cost of required improvements shall be paid for by new development.
6. Applicants shall identify and mitigate, at the sole cost of the applicant, all potential impacts to the transportation system from new development that adversely impact the operations and safety of the circulation system.
7. 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~~ applicant, ~~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.~~
10. 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.~~

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 ~~CD~~ 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.
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.
12. Existing and new 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.
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.
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.

POLICY FOUR. ~~The circulation system shall provide for roads 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.~~

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

POLICY EIGHT. Promote public transit as a viable transportation choice.

IMPLEMENTATION MEASURES

- ~~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.~~
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
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 the site improvements are paid by the developer and/or applicant.
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.
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.
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.

Impact TRA-1: Result in increased VMT on a per capita basis (less than significant)

Transportation is a major contributor to GHG emissions. According to the U.S. Environmental Protection Agency, the transportation sector was responsible for nearly 30% of all GHG emissions in the United States (based on 2006 data). In California, transportation is responsible for about 40% of GHG emissions (based on 2004 data). Transportation is the direct result of population and employment growth, which generates vehicle trips to move goods, provide public services, and connect people with work, school, shopping, and other activities. While a number of factors influence daily trip making, the following variables are some of the most influential when it comes to how individuals travel:

- Income
- Age
- Household size

- Workers per household
- Autos available
- Access to transit
- Comfort and convenience of travel modes

A performance measure used to quantify the amount of travel is VMT, which is useful because the amount of travel and conditions under which the travel occurs directly relate to how much fuel vehicles burn. One combusted gallon of gas from a vehicle is equal to approximately 24 pounds of carbon dioxide. Given today's average fuel mileage of vehicles (i.e., approximately 22 miles per gallon), 1 mile of travel equates to about 1 pound of carbon dioxide. As a result, increases in VMT directly cause increases in GHG emissions and air pollution.

Growth in travel (especially vehicle travel) is due in large part to urban development patterns (i.e., the built environment). Over the last half century, homes have been built farther from workplaces, schools have been located farther from neighborhoods they serve, and other destinations, including shopping, have been isolated from where people live and work. A significant portion of new development since World War II has been planned and built in a pattern that is dependent on the use of cars as the primary mode of travel. As a larger share of the built environment has become automobile dependent, vehicle trips and distances have increased, and walking and public transit use have declined. Population growth has been responsible for approximately a quarter of the increase in vehicle travel over the last couple of decades.

VMT measurement has one primary limitation: it is not directly observed. Methods do not exist that can measure the trip distances of all vehicles on a given day. VMT is typically quantified as an output from travel demand models and is calculated based on the number of cars multiplied by the distance traveled by each car. As such, the VMT estimate is dependent on the level of detail in the network and other variables related to vehicle movement through the network. The volume and distance of traffic depends on land use types, density/intensity, and patterns as well as the supporting transportation system. A travel demand model attempts to represent this relationship when forecasting vehicle trips and VMT.

Although the calculation of VMT is simply the number of cars multiplied by the distance traveled by each car, VMT performance measures can be reported differently. For this project, VMT was reported based on the sum of:

1. 100% of VMT associated with vehicle trips originating and terminating within unincorporated Stanislaus County boundaries; plus
2. 50% of VMT associated with trips with an origin or destination outside of unincorporated Stanislaus County; plus
3. 0% of VMT associated with trips that pass through the unincorporated county with neither an origin nor destination.

Trips that have neither an origin nor destination within the county are not included in the VMT total, as county General Plan policies cannot appreciably affect the amount of through traffic in the area within its jurisdiction. The total VMT is then divided by the unincorporated county's total service population, defined as the residential population plus the number of jobs; results are summarized in Table 3.16-3.

The daily VMT for the entire county (including unincorporated and incorporated areas) based on the StanCOG model is projected to grow by approximately 29% by 2035; total population and employment in the unincorporated county is expected to grow at a slightly faster rate. Determining the percentage of VMT for only the unincorporated area is difficult because of the limitations of the travel demand model. Specific limitations of the travel demand model related to the calculation of VMT include the following:

- The structure of the travel demand model is set up so that land uses are represented by areas known as traffic analysis zones (TAZs). Some TAZs in the model overlap between the unincorporated areas and the incorporated cities. Additionally, the TAZ structure could under- or overstate trip lengths between adjacent TAZs because of the model roadway network.
- The model combines trips from both residential and non-residential land uses before assigning vehicle trips, which makes it difficult to determine the VMT associated with only the new residential population being added.

The regional scale of the model and its limited sensitivity to built environment variables such as land use density and diversity can overstate vehicle trips and VMT for areas that follow “smart growth” land use patterns (i.e., compact, mixed-use, pedestrian-accommodating communities).

Table 3.16-3. Regional Transportation Performance Measures for Stanislaus County

Performance Measure	Base Year (2014) Conditions		General Plan 2035	
	Entire County (including Cities)	Unincorporated Only	Entire County (including Cities)	Unincorporated Only
Households	173,764	29,445	224,132	65,669
Population	514,796	88,915	657,401	192,585
Employment	168,957	44,246	236,535	92,134
Daily VMT	5,818,672 ^a	1,485,775 ^b	8,246,971 ^c	3,096,679 ^d
Daily VMT per Household	33.49	50.46	38.80	47.16
Daily VMT per Service Population ^e	8.51	11.16	9.23	10.88

Source: StanCOG RTP/SCS Model as modified to reflect county General Plan updates.

^a Trucks compose 13.5% of total VMT.

^b Trucks compose 15.5% of total VMT.

^c Trucks compose 12.4% of total VMT.

^d Trucks compose 13.6% of total VMT.

^e “Service Population” = residential population plus the number of jobs.

The General Plan update includes new population and employment growth that would generate additional VMT, which would result in increased air pollutant and GHG emissions as well as additional energy consumption from vehicle travel. However, the expected location of the employment and household growth results in a slight decline in VMT generated per household and service population.

Based on the average VMT of 50 miles generated per household per weekday base year conditions for the unincorporated area, the existing households generate 1,485,775 miles of vehicle travel per day. Incorporated cities in Stanislaus County such as Modesto and Patterson have lower levels of VMT generated per household, as there are more jobs, goods, and services closer to residential

developments in incorporated cities. This is reflected in the lower VMT per household and per service population in the cities when compared to the unincorporated area.

As illustrated in Table 3.16-3, the total daily VMT is expected to increase within the unincorporated area by 2035. However, the daily VMT in the unincorporated area is expected to decrease slightly on both a per-household and a service population basis, indicating that planned development that could occur under the proposed General Plan update would decrease the average distance between goods and services within the unincorporated county. Therefore, implementation of the General Plan policies described above is expected to have a less-than-significant impact on VMT.

Significance without Mitigation: Less than significant (no mitigation required)

Impact TRA-2: Result in traffic operations below LOS C for Stanislaus County roadways, which is the minimum acceptable threshold according to the General Plan (less than significant)

Figure 3.16-4 displays the daily roadway segment LOS in 2035, reflecting expected conditions with buildout of the land uses and circulation network identified in Draft General Plan; as the Draft General Plan does not propose to change land use designations or the circulation network as compared to the current General Plan, the results are reflective of Without- and With-Project conditions. The General Plan transportation analysis is based on daily conditions to provide an overall assessment of the adequacy of the facility type and number of lanes. Detailed peak hour analysis will be required to assess the impacts of individual land use development projects under the General Plan update (Circulation Element Goal One, Policy One, Implementation Measure 6). Because no specific development projects are proposed with the General Plan update, that level of analytical detail is outside the scope of this program-level analysis, although it will occur for specific projects during general plan implementation.

The impacts identified are due to increases in daily traffic volumes based on future forecasted conditions that include development from build-out of the Draft General Plan (there are no land use or circulation changes between the current General Plan and the General Plan update and the effects of policy changes can be difficult to quantify within a regional travel demand model; therefore, the without project and with project analysis results are the same) and traffic generated within and outside the rest of the StanCOG region. Based on the StanCOG model estimate of vehicle trips in Stanislaus County, build-out of the General Plan to 2035 would result in the unincorporated area generating approximately 34% of the total VMT generated in Stanislaus County (excluding regional through trips). Therefore, the impacts of planned development in the unincorporated area represent only a portion of the total vehicle trips on the roadway network that will contribute to increases in daily traffic volumes. It is the intent of the county to mitigate the fair-share of impacts caused by future development under the General Plan 2035 through developer-funded improvements. However, full mitigation will depend on the remaining fair-share for roadway improvements to be provided by other planned development in the region.

Circulation Element Goal One, Policy Two, Implementation Measure 1 of the current General Plan sets LOS C as the congestion standard for all county roadways and intersections, except within the sphere of influence of a city that has adopted a lower standard; however, in no case is the county standard to fall below LOS D. The general plan update would change the standard to peak hour LOS D for county roadways and LOS C at all county intersections, while retaining the exception for roads within the sphere of influence of a city. Based on the LOS identified in Table 3.16-2, the following roadway is anticipated to operate at worse than LOS C in the unincorporated county on a

daily basis peak hour, assuming buildout of the General Plan combined with future traffic generated within and outside the rest of the StanCOG region by 2035:

- Sisk Road between Wallasey and Wessex (LOS D)
- Berkeley Avenue between Ramson Drive and Paulson Road (LOS D)

The segment of Sisk Road is within the sphere of influence of the city of Modesto. The Modesto Urban Area General Plan allows LOS D on this road (Chapter V. Community Services and Facilities, Policy 8, Circulation and Transportation Policies – Planned Urbanizing Area– V.B.8.b[1]). Therefore, LOS D is considered acceptable for this segment of Sisk Road and the impact is considered less than significant.

The segment of Berkeley Avenue is within the sphere of influence of the City of Turlock. The Turlock General Plan allows LOS D on this road (Circulation Policies 5.2-s and 5.2-c). Therefore, LOS D is considered acceptable for this segment of Berkeley Road and the impact is considered less-than-significant.

This impact also considers the general plan update's contribution to the cumulative impact of future development, as represented in the TCM. The general plan update policies will ensure that traffic levels do not exceed the county and city congestion standards. Therefore, the general plan update would not make a cumulatively considerable contribution to the cumulative traffic impact.

Significance without Mitigation: Less than significant (no mitigation required)

Impact TRA-3: Result in traffic operations below the minimum acceptable thresholds on roadways outside Stanislaus County's jurisdiction (i.e., Caltrans facilities) (significant and unavoidable)

Caltrans permits LOS D conditions on its freeway facilities within urbanized areas, such as SR 99 through Modesto, Ceres, and Turlock. For all other Caltrans facilities evaluated for this study, LOS C was considered the LOS standard. Significant impacts are projected on portions of the following roadways, as shown in Table 3.16-2:

- I-5 between Ingram Creek Road and Diablo Grande Parkway (LOS D)
- SR 99 segments north of Modesto, between Modesto and Ceres, and between Ceres and Turlock (LOS E and F)
- SR-108 between Ladd Road and Saint Francis Road (LOS D)
- SR-120 segments within and north of Oakdale (LOS F)
- SR 132 (Maze Boulevard) segments near the San Joaquin County line (LOS D, E and F)
- SR 132 (Yosemite Boulevard) east of Modesto (LOS D, E and F)

The resulting LOS for each of the identified roadway segments is due to a combination of cumulative traffic assuming build-out of the General Plan combined with traffic generated within and outside the rest of the StanCOG region. The General Plan update special study areas that would evaluate proposed new and upgraded roadway facilities include SR 132 from east of Empire to the San Joaquin County line, the North East Turlock Expressway between Turlock and Patterson, the North and South County Corridor, and the Faith Home expressway. The North County Corridor and Faith Home Road expressways are included in the 2014 RTP/SCS as Tier I projects and are reflected in the

analysis of the General Plan update. Other new roadway facilities do not have funding identified and therefore were not included in the base analysis.

The policies and implementation measures included in the General Plan update are intended to mitigate the county's impact on state facilities from planned development under the General Plan, as amended by the General Plan update. Circulation Element Goal Three, Policy Nine, Implementation Measure 1 of the current General Plan specifies that "[t]he 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." The General Plan update retains this implementation measure under Goal Two, Policy Nine, without change. In addition, the General Plan update retains the Circulation Element's requirement that development projects that may affect Caltrans facilities must prepare traffic impact analyses using Caltrans' *Guide for the Preparation of Traffic Impact Studies*.

Land Use Element Goal Four, Policy Twenty-Five provides that "[n]ew development shall pay its fair share of the cost of cumulative impacts on circulation and transit systems." A portion of this this cost will be funded through the PFF program. Implementation Measure 2 under this policy is being expanded by the General Plan update so that traffic impacts not covered under PFFs are to be identified and additional impact mitigation fees paid by the subdivider and/or developer.

However, implementation of future improvements on state facilities is uncertain because the future actions of Caltrans and StanCOG are unknown. Furthermore, the planned development in the unincorporated area of the county only accounts for a portion of the need for future improvements on state facilities, and the remaining cost of necessary improvements associated with regional through traffic or other jurisdictions would need to be collected.

As coordination and payment of regional fees does not guarantee that improvements would be in place, impacts on the state highway system are considered significant and unavoidable.

The Circulation Element of the General Plan update identifies future roadway capacity expansion projects for which full funding is not ensured. Implementation Measures 3 and 4 of Circulation Element Goal One, Policy One require new development to finance and construct a project's off-site circulation improvements and pay a fair share toward cumulative project impacts, using the General Plan update's LOS and other relevant policies as the threshold for mitigation. This approach will be effective for ensuring that new development in the unincorporated county pays a fair share of planned improvements; however, these policies may not result in full funding for improvements because the funding share associated with regional through traffic or from sources not subject to discretionary review and conditioning by Stanislaus County would not be captured.

Development in the county is subject to the county PFF and the RTIF to collect fees from development projects in both cities and unincorporated areas of the county. Regular updates of this fee have occurred, with the last update occurring in 2010. However, as there is no assurance that full funding for the planned roadway improvements can be collected, this impact is considered significant and unavoidable.

Significance with Mitigation: Significant and unavoidable (no mitigation available)

Impact TRA-4: Create demand for public transit unable to be met by planned services and facilities or disrupt existing, or interfere with planned, transit services or facilities (less than significant)

A review of the Circulation Element amendments proposed by the General Plan update did not reveal potential internal policy inconsistencies or inconsistencies with other adopted plans or programs supporting the provision of transit facilities or services in Stanislaus County. The specific plans and programs against which the General Plan update was reviewed are listed in Section 3.16.2, *Environmental Setting*, above.

Goal One, Policy Eight of the Circulation Element promotes transit as a viable transportation choice for county residents and workers. Implementation measures continue support of the existing transit system and look for opportunities to expand the provision of transit in existing and planned development areas.

While implementation of the General Plan, as amended by the General Plan update, would increase demand for public transit service in an area with limited available service, implementation of the policies and programs included in the General Plan update would result in a less-than-significant impact related to transit service by providing the necessary infrastructure for transit service on a project-specific basis.

Significance without Mitigation: Less than significant (no mitigation required)

Impact TRA-5: Disrupt existing, or interfere with planned, bicycle or pedestrian facilities (less than significant)

A review of the Circulation Element amendments contained in the General Plan update did not reveal potential internal policy inconsistencies or inconsistencies with other adopted plans or programs supporting the provision of bicycle and pedestrian facilities in Stanislaus County. The specific plans and programs against which the General Plan update was reviewed are listed in Section 3.16.2 above. The General Plan update incorporates the StanCOG NMTP by reference and includes Land Use Goal Six, Policy Twenty-Nine and Circulation Element Goal One, Policy Four, with supporting implementation measures that encourage the inclusion of bicycle and pedestrian facilities in new development. These are consistent with current General Plan Circulation Element Goal Two, Policy Seven discussing the provision of bikeways and pedestrian facilities. Based on this review, the impact on bicycle and pedestrian circulation with implementation of the General Plan update would be less than significant.

Significance without Mitigation: Less than significant (no mitigation required)

Impact TRA-6: Result in transportation network changes that would prevent the efficient movement of goods within the county (less than significant individual; significant and unavoidable cumulative)

A review of the Circulation Element amendments proposed in the General Plan update revealed no potential internal policy inconsistencies or discrepancies with other adopted plans or programs supporting the provision of goods movement Stanislaus County. Although some existing roadways would experience increased use during peak travel times, there would be multiple hours of the day with sufficient capacity to accommodate agricultural transport and other goods movement on county roads. Current Circulation Element Goal Three, Policy Nine and the associated

implementation measures commit the county to coordinating with other agencies to upgrade existing state highways and other key roadways in the county. In addition, Implementation Measure 1 of Circulation Element Goal One, Policy Two, as proposed to be amended in the General Plan update, identifies a reasonable LOS on the county's roadway system that takes into the account the rural environment and is intended to protect the capacity of the county's roadway network. As a result, implementation of the General Plan update would result in a less-than-significant impact related to goods movement policy conflicts on county roads.

Development under the General Plan, as amended by the project, will contribute to future congestion on the state highway system on segments of SR 120, Hwy 99, and SR 132 exceeding the concept level LOS in the Caltrans "Transportation Concept Reports" for SR 108, SR 120, and SR 132 and the "Corridor System Management Plan" for Hwy 99. (California Department of Transportation 2014a, 2014b, 2011a, 2011b) The forecasted levels of congestion are illustrated in Table 3.16-2. Future congestion on the state highway system will result from traffic generated within the county, including the incorporated cities, and traffic that is traveling through the county. The Project will not have a significant individual impact on the system, but it will make a considerable contribution to the cumulative impact on the state highway system. Current Circulation Element Goal Three, Policy Nine and the associated implementation measures commit the county to coordinating with other agencies to upgrade existing state highways. This will reduce the county's contribution, but not so much that it will not be considerable.

Significance without Mitigation: Less than significant (no mitigation required) individual impact; significant and unavoidable cumulative impact (no mitigation available)

Impact TRA-7: Result in a change in air traffic patterns, including an increase in traffic levels or a change in location that results in substantial safety risks (less than significant)

A review of the Circulation Element amendments in the General Plan update revealed no substantial internal policy inconsistencies or discrepancies with other adopted plans or programs supporting the provision of aviation facilities or services in Stanislaus County (see the discussion under Impact LAN-1 in Section 3.10, *Land Use*). In addition, demand for aviation facilities or services, which may increase slightly with population and employment growth in Stanislaus County, is not expected to cause operational problems at airports in the county that would not be addressed by separate studies of proposed expansion, such as for the Crows Landing Air Facility.

The specific plans and programs against which the General Plan update was reviewed are listed in Section 3.16.2 above and in Section 3.10, *Land Use*. Implementation of the General Plan update would result in a less-than-significant impact related to aviation policy conflicts.

Significance without Mitigation: Less than significant (no mitigation required)

Impact TRA-8: Create additional vehicle, bicycle, or pedestrian travel on roadways or other facilities that do not meet current county design standards (significant and unavoidable)

The Stanislaus County Standards and Specifications (Department of Public Works, July 2, 2014) identify current county design standards, including roadway cross-sections, structural sections, and sight distance requirements. Vehicle, bicycle, and/or pedestrian travel are anticipated to increase on roadways that do not currently meet county design standards with build-out of the General Plan, as amended by the General Plan update. Circulation Element Goal One, Policies 1 and 2 and their appurtenant Implementation Measures, as amended by the General Plan update, will require

applicants for development projects to identify and mitigate impacts on the transportation system, including upgrading the existing county road system as new development occurs and roadway network improvements are needed to accommodate increased travel demand.

However, implementation of upgrades to the county roadway system may be limited by lack of funding sources. For these reasons, this impact would be significant and unavoidable.

Significance: Significant and unavoidable (no mitigation available)

Impact TRA-9: Substantially conflict with applicable plans, policies, and regulations of other agencies and jurisdictions where such conflict would result in an adverse physical change in the environment (less than significant)

StanCOG provides transportation planning and funding for the Stanislaus County region. StanCOG adopted the 2014 RTP/SCS and associated EIR in June 2014 to provide the platform for identifying and funding transportation needs for the next 25 years. The General Plan update incorporates policies from the 2014 RTP/SCS, including the development of a system of state highways and expressways to allow more efficient people and goods movement, and continues to recognize the importance of the cities' general plans in guiding land use (see Land Use Element Goal Four, Policy Twenty-Five). The General Plan update is consistent with the 2014 RTP/SCS.

Significance without Mitigation: Less than significant (no mitigation required)

3.16.4 References Cited

Printed References

- California Department of Transportation. 2014a. *State Route 108 Transportation Concept Report*. Available: http://www.dot.ca.gov/dist10/divisions/Planning/advancedplanning/docs/CSMP's/CSMP's%20added%20to%20website%20June%202013/STA_SR-99_CSMP_Final.pdf. Accessed: March 30, 2015.
- . 2014b. *State Route 132 Transportation Concept Report*. Available: http://www.dot.ca.gov/dist10/divisions/Planning/advancedplanning/docs/TCR's/SR-132TCRfinal10_10_2014.pdf. Accessed: March 30, 2015.
- . 2011a. *State Route 120 Transportation Concept Report*. Available: <http://www.dot.ca.gov/dist10/divisions/Planning/advancedplanning/docs/TCR's/SR120web.pdf>. Accessed: March 30, 2015.
- . 2011b. *State Route 99 Stanislaus County Corridor System Management Plan*. Available: http://www.dot.ca.gov/dist10/divisions/Planning/advancedplanning/docs/CSMP's/CSMP's%20added%20to%20website%20June%202013/STA_SR-99_CSMP_Final.pdf. Accessed: March 30, 2015.
- Stanislaus County. Various dates. *Stanislaus County General Plan*. Available: <http://www.co.stanislaus.ca.us/planning/pl/general-plan.shtm>. Accessed: January 20, 2015.
- Stanislaus Council of Governments. 2013. *Stanislaus Council of Governments (StanCOG) Non-Motorized Transportation Plan*. Available: <http://www.stancog.org/nmtp.shtm>. Accessed: January 20, 2015.

———. 2014. *2014 Regional Transportation Plan/Sustainable Communities Strategy*. Available: <http://www.stancog.org/rtp.shtm>. Accessed: January 20, 2015.

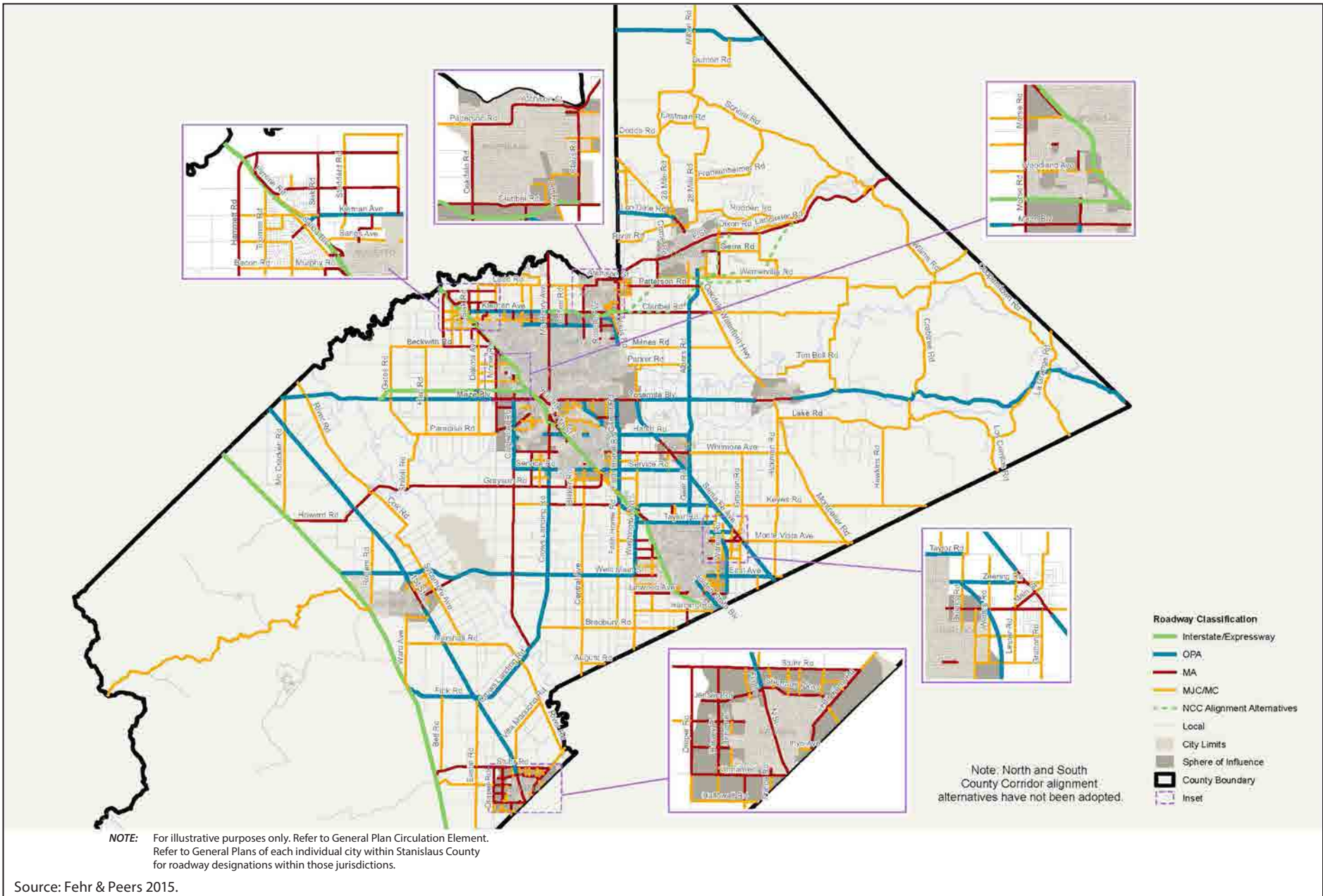
Transportation Research Board. 2010. *Highway Capacity Manual*. Washington, DC.

U.S. Bureau of the Census. 2015. American FactFinder. "Community Facts. Stanislaus County. Commuting Characteristics by Sex." Washington, D.C.

University of California, Berkeley. 2015. Transportation Injury Mapping System. Search for Stanislaus County information. Available: <http://tims.berkeley.edu/>. Accessed: January 23, 2015.

Personal Communications

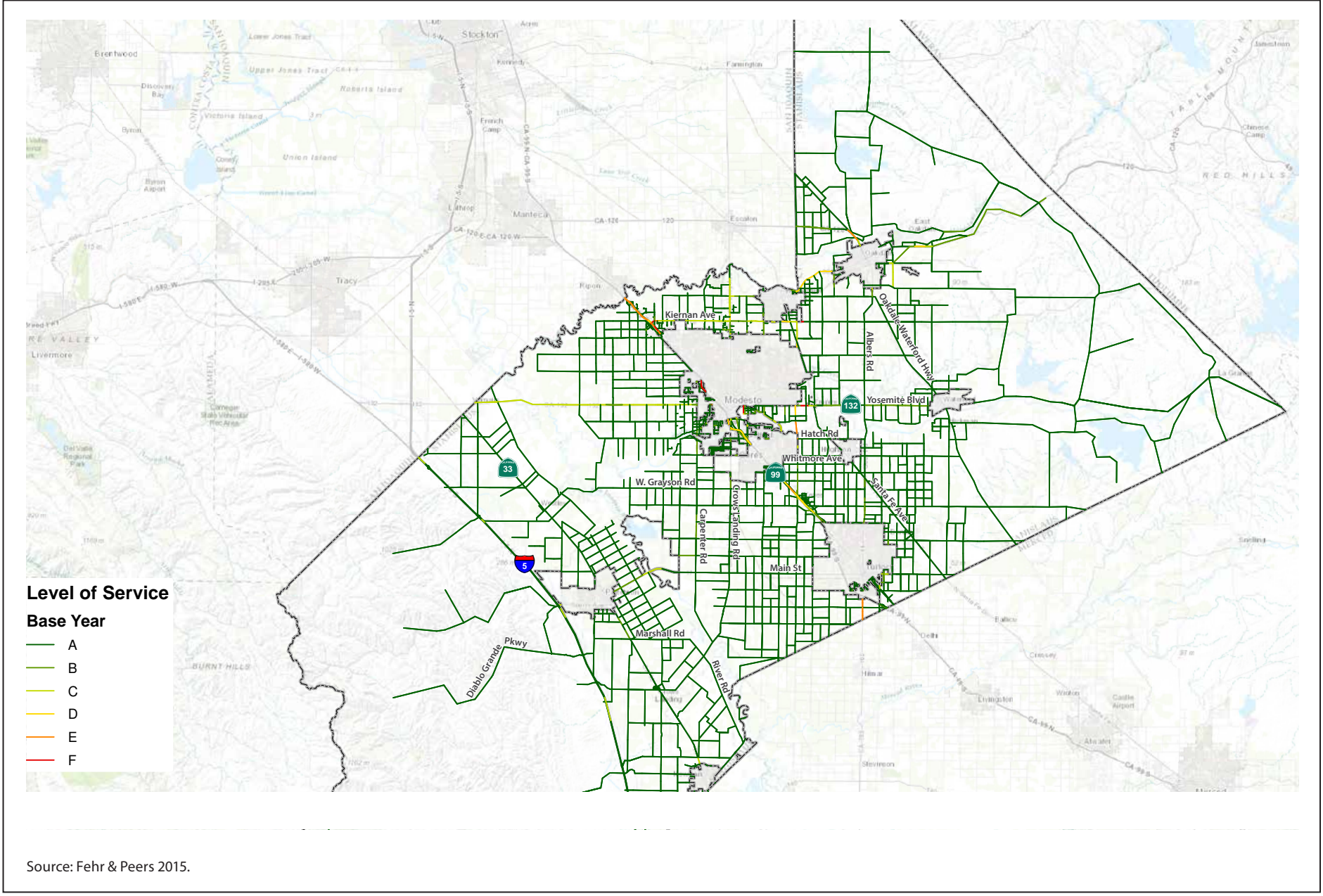
Chen, Arthur. Associate Planner, StanCOG, Modesto, California. July 2014—e-mail correspondence and telephone communication to gain permission to use StanCOG model for the analysis of the Stanislaus County General Plan and to confirm land use inputs.



Graphics ... 00203.10 (1-9-2016).tm



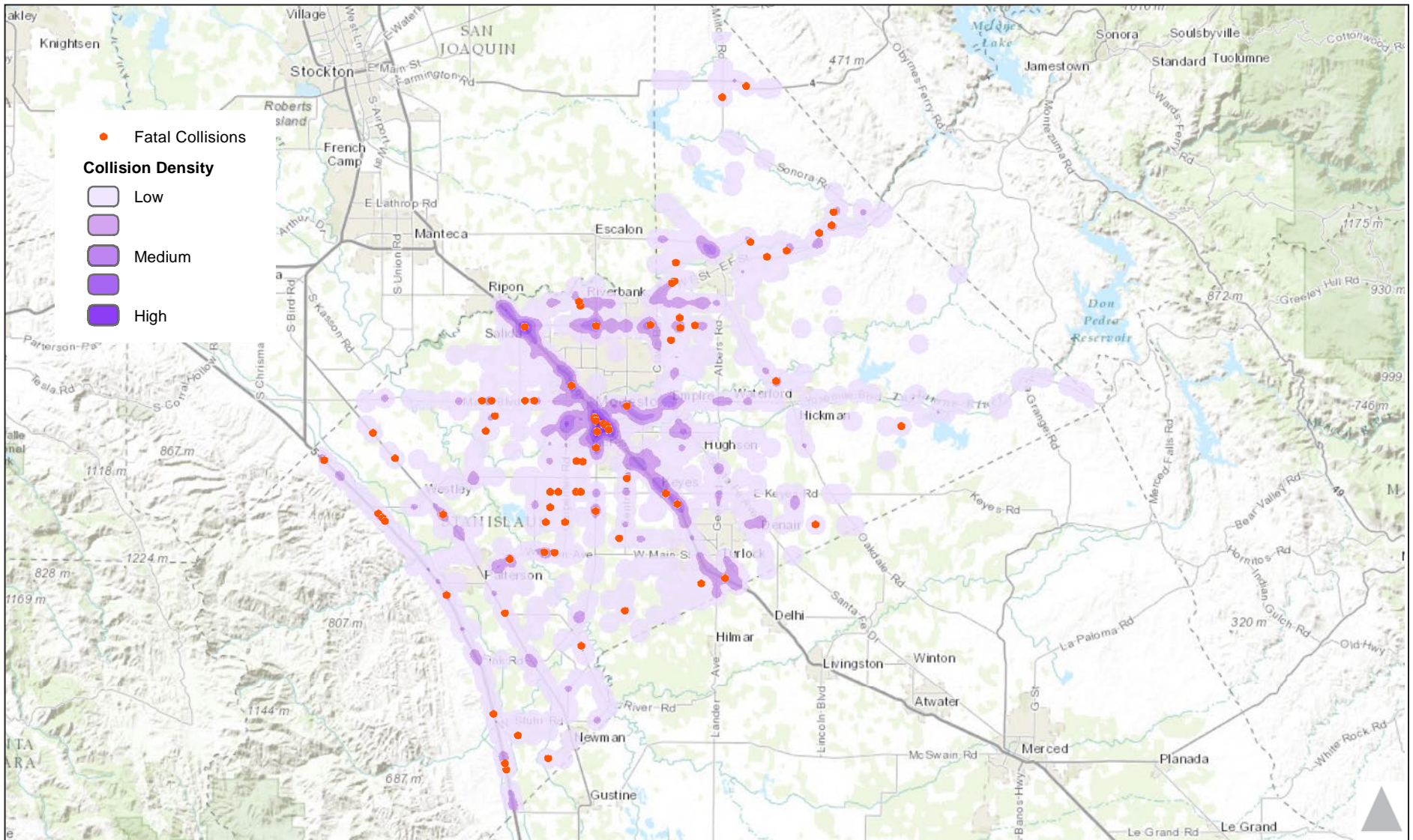
**Figure 3.16-1
Roadway Classification**



Graphics ... 00203.10 (4-14-2016).tm



Figure 3.16-2
Base Year Daily Level of Service, Stanislaus County



Note: 88% of collisions mapped
 Source: California Statewide Integrated Traffic Records System (SWITRS)
 via UC Berkeley Transportation Injury Mapping System (TIMS) reflective of 2010 to 2012

Source: Fehr & Peers 2015.



Figure 3.16-3
Collisions 2010–2012, Stanislaus County

3.17 Utilities and Service Systems

3.17.1 Introduction

This section discusses the impacts of the plan updates with respect to utilities and service systems. It lists the thresholds of significance that form the basis of the environmental analysis, describes the utilities and service systems study area and major sources used in the analysis, provides environmental setting information that is relevant to utilities and service systems, and assesses whether the plan updates would result significant impacts with respect to utilities and service systems.

3.17.2 Environmental Setting

This section describes the state, regional, and local regulations and policies that are applicable to the plan updates and the existing conditions pertaining to utilities and service systems in the county. The existing conditions will constitute the baseline for analysis.

Regulatory Setting

This section describes the state, regional, and local regulations related to utilities and service systems that would apply to the plan updates. There are no applicable federal laws or regulations.

State

California Environmental Quality Act

CEQA requires an EIR to discuss whether a project's projected demands are anticipated to exceed the capacity of existing and planned utility and service systems, such as water, wastewater treatment, and solid waste disposal. Under CEQA, an EIR must adequately address the reasonably foreseeable impacts of providing utility and service systems to the project. The EIR must also disclose whether current utility and service systems are inadequate with respect to serving the projected level of development and what the expected impacts of upgrading them would be.

California Water Plan

The California Water Plan, prepared by the California Department of Water Resources, was most recently updated in 2009. The plan provides a framework that water managers, legislators, and the public can use when considering options and making decisions regarding California's water future. The plan, which is updated every five years, presents basic data and information regarding California's water resources, including water supply evaluations and assessments of agricultural, urban, and environmental water uses to quantify the gap between water supplies and uses. The plan also identifies and evaluates existing and proposed statewide demand management and water supply augmentation programs and projects to address the state's water needs. The plan provides resource management strategies and recommendations for strengthening integrated regional water management. The resource management strategies help regions meet future demands and sustain the environment, resources, and economy; involve communities in decision making; and meet various goals. A resource management strategy is a project, program, or policy that helps local

agencies and governments manage their water and related resources. These strategies can reduce water demand, improve operational efficiency, increase water supply, improve water quality, and improve flood management. They can also improve resource stewardship practices.

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939) requires each city and county in the state of California and regional solid waste management agencies to enact plans and implement programs to divert 25% of their waste stream by 1995 and 50% by 2000. The law also requires each county to prepare an Integrated Waste Management Plan that describes the activities the county will undertake to meet these goals and submit an annual report to the California Department of Resources Recycling and Recovery (CalRecycle) that summarizes its yearly progress with respect to implementing waste diversion programs.

AB 341 of 2011 expanded the recycling requirements for commercial businesses and multi-family residences. Any business that generates four cubic yards or more of waste per week and multi-family residences with five or more units are now required to have recycling service.

AB 75 and AB 341

AB 75 (Public Resources Code Sections 42920–4297) required all state agencies and large state facilities to divert at least 25% of all solid waste from landfills by January 1, 2002, and 50% by January 1, 2004. The law also requires each agency to submit an annual report to CalRecycle that summarizes its yearly progress with respect to implementing waste diversion programs.

AB 341 of 2011 established a policy goal of the state that requires “not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020, and annually thereafter.” Unlike AB 75, which focuses on local diversion, AB 341 requires the state, primarily through CalRecycle, to take a statewide approach to decreasing California’s reliance on landfills. CalRecycle is developing strategies to implement this goal (e.g., diverting organic waste from landfills, continuing to reform the Beverage Container Recycling Program to improve the level of recycling, expanding recycling/manufacturing infrastructure through permitting/compliance assistance and financing, exploring new models for state and local funding of materials management programs, promoting state procurement of postconsumer recycled-content products, promoting extended producer responsibility) (California Department of Resources Recycling and Recovery 2014a).

Title 27 of California Code of Regulations, Division 2

In accordance with California Code of Regulations (CCR) Title 27, Sections 21600 through 21900, solid and hazardous waste transfer and disposal facilities in Stanislaus County are regulated jointly by the California Regional Water Quality Control Board, Central Valley Region (CVRWQCB) and CalRecycle. Both the CVRWQCB and CalRecycle regulate facilities individually through permits.

Local

Stanislaus County Local Agency Formation Commission

The Stanislaus County Local Agency Formation Commission (LAFCO) is responsible for administering the Cortese-Knox- Hertzberg Local Government Reorganization Act of 2000 (Government Code Section 56000, et seq.). The act establishes the powers and responsibilities of the

LAFCOs in each county and the procedures for local government changes regarding organization, including city incorporations, annexations, and city and special district consolidations. Among the purposes of the LAFCO is to discourage urban sprawl through the orderly formation and development of local agencies. The LAFCO is also responsible for preparing a Municipal Services Review (MSR) that describes the jurisdictional area, services, and service capacity of each of the cities and special districts within the county. The MSRs are important sources of information regarding available services.

Stanislaus County Department of Environmental Resources

The Department of Environmental Resources manages the county's solid waste activities. Its responsibilities include the following:

- Administering the refuse collection agreements for the franchise waste haulers that provide solid waste collection services in the unincorporated county.
- Permitting refuse collectors, recycling facilities, and food processing by-product sites.
- Preparing and updating the county-wide Integrated Waste Management Plan for the county and its nine cities.
- Operating the county's Fink Road Sanitary Landfill, located west of Interstate-5 at the Fink Road exit.
- Administering the service agreement with Covanta Energy for operation of the Stanislaus Resource Recovery Facility and an energy-from-waste project adjacent to the Fink Road Sanitary Landfill.
- Post closure responsibilities of the Geer Road Landfill

Stanislaus County General Plan

Land Use Element

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY FIVE. Residential densities as defined in the General Plan shall be the maximum based upon environmental constraints, the availability of public services, and acceptable service levels. The densities reflected may not always be achievable and shall not be approved unless there is proper site planning and provision of suitable open space and recreational areas consistent with the supportive goals and policies of the General Plan.

IMPLEMENTATION MEASURE

1. Residential development shall not be approved at the maximum density if: (1) it threatens riparian habitat; (2) growth-limiting factors such as high water table, poor soil percolation, geological fault areas, and airport hazard areas exist; (3) development is in a designated floodway or does not meet the requirements of Chapter 16.40 of the County Code; (4) it does not comply with the airport height limiting ordinance restrictions; (5) there is lack of, or inadequate, sanitary sewer or public water service; or (6) environmental impacts, including traffic, cannot be mitigated.

POLICY SIX. Preserve and encourage upgrading of existing unincorporated urban communities.

IMPLEMENTATION MEASURE

3. Land within the sphere of influence of a community services district, sanitary district or domestic water district shall be rezoned for development only if the US (Urban Service) combining district is used.

GOAL TWO. Ensure compatibility between land uses.

POLICY FIFTEEN. Uses should not be permitted to intrude into or be located adjacent to areas that are identified as existing and/or potential sites for solid waste facilities if such uses would not be compatible.

IMPLEMENTATION MEASURES

1. Potential conflicts with existing solid waste facilities shall be avoided.
2. When the Countywide Integrated Waste Management Plan is adopted, those sites which are identified as potential solid waste facilities should be protected from land use conflicts.

GOAL THREE. Foster stable economic growth through appropriate land use policies.

POLICY SEVENTEEN. Promote diversification and growth of the local economy.

IMPLEMENTATION MEASURE

4. Encourage the development of new industries and the retention of existing industries that help the community reduce, recycle, and/or reuse waste that would otherwise require disposal.

GOAL FOUR. Ensure that an effective level of public service is provided in unincorporated areas.

POLICY TWENTY-TWO. 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.

IMPLEMENTATION MEASURES

2. Only development requests for which sewer service capacity that meets the standards of Measure X and domestic water are available shall be approved.
5. The current level of service of public agencies shall be determined and not allowed to deteriorate as a result of new development.
6. Rezoning of property for development prior to: 1) annexation to a special district; or 2) inclusion of such property into a newly formed special district that will provide urban services (i.e. sanitary sewer district, domestic water district, or community service district) shall be approved only if the US zoning district is used as a combining district or comparable requirements are incorporated into a Community Plan District.
7. Only development requests which have recognized and mitigated any significant impacts on solid waste reduction, recycling, disposal, reuse, collection, handling, and removal shall be approved.
9. The County will coordinate development with existing irrigation, water, utility and transportation systems by referring projects to appropriate agencies and organizations for review and comment.

Conservation/Open Space Element

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

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.
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.

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.
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 needs of the project without adversely impacting the quality and quantity of existing local water resources.

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.

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

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.
2. Complete and adopt the state-mandated Countywide Integrated Waste Management Plan by January 31, 1996.
3. Encourage the use of transformation facilities (such as waste-to-energy plants) as a component of the County's integrated waste management system.
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.
5. Encourage and promote activities, projects, legislation, businesses and industries that cause special wastes (e.g., food processing residue, demolition/construction waste, inert wastes, tires, de-watered sludge, household hazardous waste, etc.) to be safely diverted from landfills or transformation facilities, including composting and co-composting operations.

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.
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.

GOAL ELEVEN. Conserve resources through promotion of waste reduction, reuse, recycling, composting, rideshare 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 transformation facilities by June 30, 1997.
2. The County shall actively pursue and implement projects, plans and programs that will effectively protect and conserve existing and future landfill capacity.

Stanislaus County Measure X

Stanislaus County Measure X states that no parcel map, subdivision, rezoning, building permit, or other development entitlement shall be authorized, approved, created, or issued by Stanislaus County for the purpose of urban development unless:

- a. Primary and secondary sewage treatment capacity exists and is available to serve said development; and
- b. Connection to said sewage treatment system will occur prior to occupancy; or
- c. A public emergency exists, based upon findings of fact describing such public emergency.

"Urban development," as defined in this ordinance, expressly excludes the following:

1. One single-family dwelling in a residential lot recorded prior to July 13, 1990
2. Agriculturally related uses for which use permits are required
3. Housing to be occupied by agricultural workers or by very low-income residents, as defined in Health and Safety Code Section 50105; and
4. Public parks and low-density recreational uses
5. Alteration or expansion of any use, provided that the amount of improved square footage existing as of November 8, 1988, is not increased by more than fifty percent (50%).

The Stanislaus County Department of Environmental Resources provides guidelines for implementation of Measure X.

Primary and secondary sewage treatment is needed:

1. For any new residential subdivision approved after July 13, 1990.
2. For any new residential sized parcels created from agricultural parcels after July 13, 1990.
3. For any new commercial or industrial project requiring building permits, or
 - However, existing commercial/industrial subdivision with a "vested" map is exempt from the secondary treatment requirement.
4. For any structural expansion or alteration requiring sewage disposal resulting in greater than 50% expansion of improved square footage existing as of November 8, 1988.

A traditional septic tank and leach field can be used:

1. For one single-family dwelling in an existing pre-July 13, 1990 recorded residential lot.
2. For single-family dwellings appropriate for the agricultural acreage designation (i.e., second dwelling on an A-2 zoned parcel of 20 acres or more).
3. For housing of agricultural workers and their families.
4. For serving an agriculturally related operation (i.e., restrooms for grading stations; hulling/drying operations; agricultural equipment repairs. etc.).
5. For a public emergency situation, as determined by the Board of Supervisors.
6. For low-density recreational use operations generating a low volume of wastewater (i.e., small campgrounds; fish-for-fee ponds, public parks, etc.).
7. For very low-income housing (i.e., 50 percent or less of the area median income, adjusted for family size).

Existing Conditions

Water Supply

The Crows Landing Community Services District (CSD), Denair CSD, Keyes CSD, Knights Ferry CSD, Modesto Irrigation District (MID), Monterey Park Tract CSD, Oakdale Irrigation District (OID), Riverdale Park Tract CSD, Stanislaus County Housing Authority, Turlock Irrigation District (TID), Western Hills Water District, and Westley CSD all provide drinking water to parts of Stanislaus County. Sources of drinking water vary.

- Crows Landing CSD distributes drinking water to residents and businesses in the unincorporated community of Crows Landing.
- Denair CSD provides drinking water to the unincorporated town of Denair.
- Keyes CSD supplies water for domestic and commercial use in the unincorporated town of Keyes.
- Knights Ferry CSD provides domestic water service connections to residential units, businesses, and the Knights Ferry Elementary School District in the unincorporated community of Knights Ferry.
- The City of Modesto serves the unincorporated town of Grayson through the former Del Este Water Company system. The district, together with TID, also provides domestic water service to

the unincorporated community of La Grange. The La Grange water system is co-owned by MID and TID; the system is operated and maintained by TID.

- Monterey Park Tract CSD provides domestic water to the unincorporated Monterey Park Tract.
- OID manages several domestic water systems, part of nine private and publicly owned systems that exist in an unincorporated area east of the city of Oakdale. Two of the systems are owned by OID; seven of the systems are owned by homeowner groups that have entered into an “improvement district” arrangement with OID to manage their water systems for state compliance.
- Riverdale Park Tract CSD provides domestic water services to the residents of the unincorporated Riverdale Park Tract community.
- The Stanislaus County Housing Authority provides municipal water service to the Stanislaus County Housing Authority’s Westley Migrant and Farm Labor Housing Complex and the Westley CSD.
- TID, together with MID, provides water for domestic use in the unincorporated community of La Grange. The La Grange domestic water system is co-owned by TID and MID; the system is operated and maintained by TID.
- Western Hills Water District provides water services to residences and businesses in the Diablo Grande Specific Plan area.

Wastewater

Denair CSD, Empire Sanitary District, Grayson CSD, Keyes CSD, Salida Sanitary District, Western Hills Water District, and Westley CSD all provide wastewater collection and sewer services to residences and businesses within their respective service areas.

Stormwater

The Stanislaus County Public Works Department provides storm drainage services to the following County Service Areas: 4 (Bristol Glen – Salida), 5 (Starlite Place – Keyes), 7 (Modesto Auto Center), 8 (Honey Bee Estates – Empire), 9 (River Road/Souza – Ceres), 10 (Salida), 11 (Gilbert Road – Oakdale), 12 (Peach Blossom Estates – Riverbank), 14 (United Pallet – Modesto), 16 (Olive Ranch – Oakdale), 18 (Atlas Park – Oakdale), 19 (Tuolumne/Gratton – Denair), 20 (Summit Corporate Center – Modesto), 21 (Riopel – Denair), 22 (Old School North – Denair), 23 (Hillsborough/Schultz – Oakdale), 24 (Hideaway Terrace – Denair), 25 (Suncrest II – Denair), 26 (Keyes), and 27 (Empire – Phase 1).

Solid Waste Disposal

Residential and commercial garbage service in the unincorporated areas of Stanislaus County is provided by three franchised garbage collection companies: Bertolotti Disposal, Gilton Solid Waste, and Turlock Scavenger.

The Fink Road Sanitary Landfill is a Class III landfill for nonhazardous municipal solid waste; the facility is owned by Stanislaus County and operated by the Stanislaus County Department of Environmental Resources. The landfill provides municipal solid waste services to Ceres, Hughson, Modesto, Newman, Oakdale, Patterson, Riverbank, Turlock, Waterford, and the unincorporated areas of Stanislaus County. It also accepts waste from the public. Stanislaus County’s Fink Road

Sanitary Landfill, the sole permitted landfill in the county, has a permitted capacity of 14,640,000 cubic yards and is permitted through 2023. As of April 2015, the facility had a remaining capacity of approximately 5,255,714 cubic yards (California Department of Resources Recycling and Recovery 2014b).

Adjacent to the Fink Road Sanitary Landfill is the Stanislaus Resource Recovery Facility (SRRF), a waste-to-energy plant owned by Stanislaus County and operated by Covanta Stanislaus, Inc. The SRRF is an 800-ton-per-day solid waste disposal, resource recovery, and electric generating facility that accepts waste from the county's franchised garbage collection companies. There are four large-scale transfer facilities in Stanislaus County (Bertolotti, Gilton, Turlock Scavenger, and Covanta), along with numerous composting operations that handle agricultural wastes, sludge, and green waste (California Department of Resources Recycling and Recovery 2014c).

3.17.3 Impact Analysis

This section discusses the approach and methodology used to assess the impacts of the plan updates; discusses the individual impacts relative to the thresholds of significance; discusses mitigation measures to minimize, avoid, rectify, reduce, eliminate, or compensate for significant impacts; and indicates the overall significance of the impact with mitigation incorporated.

Major Sources Used in Analysis

The major sources used in this analysis are listed below:

- Stanislaus County Local Agency Formation Commission – Municipal Service Reviews (<http://www.stanislauslafco.org/info/msr.htm>)
- Stanislaus County Environmental Resources Department – Solid Waste/Landfills (<http://www.stancounty.com/er/solid-waste.shtm>)

Approach and Methodology

This qualitative analysis of utilities and service systems relies on the LAFCO MSRs as the primary source of information regarding existing domestic water, sewer, and stormwater service systems. The *Draft Regional Housing Needs Plan for Stanislaus County 2014–2023* (Stanislaus Council of Governments 2014a) and the *Regional Demographic Forecast* (Stanislaus Council of Governments 2014b) were the main sources of projected new housing numbers for unincorporated Stanislaus County. The primary sources of information on solid waste disposal in Stanislaus County were the Stanislaus County Environmental Resources Department and the initial study/mitigated negative declaration (IS/MND) for the Fink Road Sanitary Landfill in-fill project. The main source of information about possible development at the Crows Landing Air Facility was the 2009 Crows Landing Air Facility Project Area Revised Preliminary Redevelopment Plan.

Note that the county is in the process of preparing a new plan for the anticipated Crows Landing Industrial Business Park, which is expected to substantially change the existing redevelopment plan. Preparation and adoption of that new plan is a separate and independent project from the projects (General Plan update and ALUCP Update) for which this EIR is being prepared. Neither the Crows Landing Industrial Business Park plan nor the general plan is dependent upon the other for adoption. A Notice of Preparation was released in October 2013 for the draft EIR for the Crows Landing Industrial Business Park, which will analyze and disclose the potential environmental

impacts of the proposed industrial business park and include mitigation measures for any significant impacts.

The analysis in this EIR takes into consideration proposed general plan policies, described below, to reduce the impact of new development on domestic water, wastewater, stormwater, and solid waste disposal services.

Thresholds of Significance

Based on State CEQA Guidelines, Appendix G, the plan updates would have a significant impact with respect to utilities and service systems if they would:

- Exceed wastewater treatment requirements of the Central Valley Regional Water Quality Control Board.
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?
- Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Comply with federal, state, and local statutes and regulations related to solid waste.

Impacts and Mitigation Measures

Impact UTL-1: Exceed wastewater treatment requirements of the Central Valley Regional Water Quality Control Board (less than significant)

The proposed project incorporates population projections adopted by the Stanislaus Council of Governments (StanCOG) that extend the planning horizon to 2035. StanCOG's regional growth forecast predicts a population for the unincorporated county jurisdiction of 133,753 in 2035, which represents an increase of approximately 21% from its 2010 population (Stanislaus Council of Governments 2014a). There is a reasonable expectation that population and housing within the utilities and service systems study area will increase accordingly. The population and housing increase projected under the proposed General Plan update and ALUCP Update would increase the demands on wastewater treatment facilities in Stanislaus County.

Wastewater treatment facilities will be needed in the future to serve the community plan areas. Implementation Measure 6 of Conservation/Open Space Element Policy Five encourages new urban development to utilize existing or new wastewater treatment facilities. However, because the distribution and timing of projected development is unknown at this time and the specific wastewater treatment requirements (i.e., size of plant, technology, treatment capacity, etc.) cannot

be predicted, the potential environmental impacts of future water and wastewater treatment facilities cannot be known. What is known is that future new or expanded facilities will be subject to CVRWQCB waste discharge requirements. In addition, future water and wastewater treatment facilities will be subject to CEQA analysis. Potential impacts will be disclosed, and site- and project-specific mitigation measures will be developed at that time. The mitigation measures will be made part of the permits issued to the facilities by the CVRWQCB, as required by CEQA.

The CVRWQCB will set the specific waste discharge requirements for any new or expanded wastewater treatment facility as part of its permit for that facility. Future water and wastewater treatment facilities will be required by law to operate in compliance with any and all requirements of the CVRWQCB permits.

This impact would be less than significant. No mitigation is required.

Significance without Mitigation: Less than significant (no mitigation required)

Impact UTL-2: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (significant and unavoidable)

As stated above, population in unincorporated Stanislaus County is expected to increase—and with it the need for new water and wastewater treatment capacity. The types, number, locations, physical sizes, and designs of future water or wastewater treatment facilities are unknown. The same is true for expansions of existing facilities. As a result, the potential environmental impacts of future water and wastewater treatment facilities cannot be precisely known at this time. Future water and wastewater treatment facilities will be subject to CEQA analysis. Potential impacts will be disclosed, and site- and project-specific mitigation measures will be developed at that time.

Land Use Element

GOAL THREE. Foster stable economic growth through appropriate land use policies.

POLICY EIGHTEEN. Promote diversification and growth of the local economy.

IMPLEMENTATION MEASURES

9. Encourage reuse of the Crows Landing Air Facility as a regional jobs center.

There are currently no water or wastewater treatment facilities in the area of Crows Landing. The nearby Crows Landing CSD has no water treatment facilities; private septic systems provide the only wastewater treatment in the area. The concept of the Crows Landing Industrial Business Park is to establish an infrastructure framework that can support future business development at Crows Landing. Development is expected to take place over a long period, with infrastructure expanded as the need arises. Although no specific time frame is available, a Notice of Preparation has been released for public review and an EIR is in preparation that will analyze the impacts of future basic infrastructure including water and wastewater treatment facilities.

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY SIX. Preserve and encourage upgrading of existing unincorporated urban communities.

IMPLEMENTATION MEASURES

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.
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.
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.

These measures address infrastructure, housing, and public health needs and assist in transforming identified disadvantaged communities into healthy communities. The State of California is expected to begin funding infrastructure improvements, including water and wastewater treatment facilities, in disadvantaged unincorporated communities through a portion of the proceeds from the “cap and trade” program established by the California Air Resources Board under AB 32, the Global Warming Solutions Act of 2006. Stanislaus County has a number of such communities that would benefit from these infrastructure improvements, including locales such as West Modesto, Riverdale Park, Keyes, Crows Landing, Westley, and Grayson. No specific facilities are currently proposed, but it is reasonable to expect that such facilities could be developed in one or more these locales in the future if funding becomes available.

The impacts from construction and operation of water and wastewater treatment facilities depend on the characteristics of the proposed facility site, its location relative to sensitive receptors, and the design of the facility. Construction of water and wastewater treatment facilities typically results in temporary impacts on noise, traffic, air quality, water quality, biological resources, and cultural resources. Permanent operational impacts typically involve aesthetics, odors, water quality, biological resources, and permanent agricultural land conversion. Odors and other potential air quality impacts generated by future water and wastewater treatment facilities would be regulated by the San Joaquin Valley Air Pollution Control District. Impacts on water quality from discharges would be addressed by CVRWQCB permit requirements.

Water and wastewater treatment facilities are subject to CEQA analysis. Although actual impacts vary, these types of facilities commonly result in one or more significant impacts that require preparation of an EIR. Mitigation measures specific to the facility’s impacts would be adopted as part of approval of the facility. Mitigation measures cannot be reasonably developed at this point in time because the characteristics and specific impacts of such future projects are unknown. Without knowing whether those mitigation measures would avoid all significant impacts of future facilities, this impact is considered significant and unavoidable.

Significance without Mitigation: Significant and unavoidable (no mitigation available)

Impact UTL-3: Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (less than significant)

The types, number, locations, physical sizes, and designs of future stormwater drainage facilities are unknown. The same is true for potential expansion of existing facilities. As a result, the potential

environmental impacts of future stormwater drainage facilities cannot be known at this time. Flooding impacts related to stormwater are discussed in Section 3.9, *Hydrology and Water Quality*.

Land Use Element

Goal Three, Policy Eighteen, Implementation Measure 9, of the Land Use Element would encourage re-use of the Crows Landing Air Facility as a regional jobs center (see Impact UTL-2). There is no municipal stormwater drainage and collection system in the area of Crows Landing. The nearby Crows Landing CSD provides no stormwater drainage service. Depending on the level of future development of the industrial business park, stormwater collection and drainage systems could be constructed at some future time.

Goal One, Policy Six, Implementation Measures 4 through 6 of the Land Use Element would encourage providing infrastructure to disadvantaged communities (see Impact UTL-2). As discussed above, these communities lack services and may need drainage facilities as part of general upgrades.

GOAL ONE. Provide for diverse land use needs by designating patterns which are responsive to the physical characteristics of the land as well as to environmental, economic and social concerns of the residents of Stanislaus County.

POLICY SIX. Preserve and encourage upgrading of existing unincorporated urban communities.

IMPLEMENTATION MEASURES

- Land within the sphere of influence of a community services district, sanitary district or domestic water district shall be rezoned for development only if ~~the US (Urban Service) combining district is used~~ capacity for connecting to available public services exists and any resulting projects are conditioned to require connection to available services.

Future stormwater drainage facilities will be subject to CEQA analysis. Potential impacts will be disclosed, and site- and project-specific mitigation measures will be developed at that time. Stormwater drainage facilities typically consist of detention and retention ponds, sometimes with associated recreational facilities, as well as curbs/gutters, stormwater drains, pipelines, and pumping facilities. These are not facilities that, by themselves, typically trigger the need for preparation of an EIR but are commonly included in EIRs for subdivision developments or specific plans. Impacts are typically related to excavation for basins and pipeline trenches and the installation of curbs/gutters. These impacts include traffic delays, noise, and dust, all of which can be mitigated through best management practices, such traffic management plans and dust control, pursuant to the San Joaquin Valley Air Pollution Control District requirements, and through mitigation measures. There are typically no operational impacts. It is reasonably foreseeable that standalone stormwater drainage facilities would not result in significant impacts that could not be mitigated to a less-than-significant level.

Significance without Mitigation: Less than significant (no mitigation required)

Impact UTL-4: Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed? (less than significant)

Given the forecast increase in population, there will be the need for expanded water supplies. However, the exact distribution and timing of projected population growth and development is unknown, and the precise location of future increased water demands cannot be predicted at this time. Water providers in areas where future demand is expected to exceed their current water

resources, should additional development occur in the future,¹ include the Keyes and Crows Landing. Service to the unincorporated community of Salida will need to be expanded as new development occurs through the installation of delivery mains and lines by the City of Modesto. Modesto uses a combination of groundwater and surface water supplies to serve its customers and future customers. (City of Modesto and Modesto Irrigation District 2011).

Land Use Element

Goal Three, Policy Eighteen, Implementation Measure 9, of the Land Use Element would encourage re-use of the Crows Landing Air Facility as a regional jobs center (see Impact UTL-2). Implementation of this policy would create the need to provide water service to the Crows Landing Air Facility. The Crows Landing CSD maintains and operates a water system, supplied by two groundwater wells, for the community of Crows Landing, about 1 mile east of the Crows Landing Air Facility. The Crows Landing CSD water system is in need of major upgrades and maintenance and considered to be at capacity. Any major development at Crows Landing Air Facility would require the construction of new water supply infrastructure and possibly major upgrades to the existing Crows Landing CSD water supply system.

See the discussion under Impact UTL-2 for a description of typical water treatment plant impacts. Should new or expanded treatment plants be needed, there is a reasonable probability that one or more could have a significant environmental impact. Because the location, size, design, and other elements of future treatment plants are unknown, no specific mitigation measures can be developed. However, specific mitigation would be part of the CEQA analysis that will be required for any such project in the future.

Portions of the unincorporated county will need new water supplies if development occurs as forecast.

Conservation/Open Space Element

GOAL TWO. Conserve water resources and protect water quality in the County.

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

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.

This measure would require the county to review all development requests to ensure that sufficient evidence has been provided to document the existence of a water supply that would be capable of meeting the short- and long-term water needs of the project without adversely affecting the quality and quantity of existing local water resources.

¹ Note that some of these communities, including Westley, Grayson, and the Monterey Park Tract, have limited practical potential for additional growth due to infrastructure limitations. They are included here to indicate that their water systems are near capacity.

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

IMPLEMENTATION MEASURES

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.
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.
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.

These measures commit the county to efforts to increase the reliability of groundwater supplies through regional coordination and cooperative implementation of water resource management tools.

As discussed in Section 3.9, *Hydrology and Water Quality*, the county's groundwater supplies are facing increased demand, and overdraft conditions are worsening. The general plan policies, including those listed above, offer the means to reduce the impacts of new development on water supplies, particularly groundwater supplies. Groundwater is not subject to entitlement. Therefore, although new development will increase demands on groundwater as discussed in Section 3.9, it will not require new entitlements when it relies on groundwater. As the community of Salida develops it will exert additional demand on the Modesto water system. The City anticipates that future demand within its service area will be met by additional surface water supplied by the Modesto Irrigation District under existing contracts. (City of Modesto and Modesto Irrigation District 2011) Supply is expected to be adequate to meet demand in normal and dry years to 2030. (City of Modesto and Modesto Irrigation District 2011) Therefore, it does not appear that new or expanded entitlements would be needed. This impact is less than significant.

Significance without Mitigation: Less than significant (no mitigation necessary)

Impact UTL -5: Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments (significant and unavoidable)

As stated above, under the proposed project, population in unincorporated Stanislaus County is expected to increase—and with it the need for new wastewater treatment capacity. The CSDs are generally at capacity to supply wastewater treatment, and additional growth would require expanding or building new facilities. See Impact UTL-2 for a discussion of wastewater treatment plants and their potential impacts. Because the location, size, design, and other elements of future treatment plants are unknown, no specific mitigation measures can be developed. However, specific mitigation would be part of the CEQA analysis that will be required for any such project in the future.

Significance without Mitigation: Significant and unavoidable (no mitigation available)

Impact UTL-6: Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs (less than significant)

Although projected population growth in the county under the amended general plan would lead to additional demands for solid waste disposal services, landfill capacity is expected to be adequate for the duration of the project. Implementation of state laws and policy will reduce the future waste stream and extend the lifespan of the existing Fink Road Sanitary Landfill. AB 341 requires the waste stream going to landfills to be reduced by 75% statewide. CalRecycle will implement strategies to meet this statutory goal through state-level measures and requirements. AB 341's broadening of recycling requirements to cover commercial and multi-family residential developments will also reduce the future waste stream going to the landfill.

The Fink Road Sanitary Landfill is permitted to receive 2,400 tons of solid waste a day through 2023; it is currently at approximately 50% of its permitted capacity. In the future, as the landfill reaches capacity, the Environmental Resources Department will apply for the necessary expansion to meet the county's projected demands.

Significance without Mitigation: Less than significant (no mitigation required)

Impact UTL-7: Comply with federal, state, and local statutes and regulations related to solid waste (less than significant)

The county is responsible for the implementation of any and all solid waste regulations through the Department of Environmental Resources. The county operates the Fink Road Sanitary Landfill and is required by the conditions of its permit from CalRecycle to operate in accordance with state laws and regulations. The general plan includes measures (Goal Four, Policy Twenty-Four (renumbered from Twenty-Two), Implementation Measure 7, of the Land Use Element) to facilitate the reduction of solid waste from future development projects (see *Regulatory Setting*).

Significance without Mitigation: Less than significant (no mitigation required)

3.17.4 References Cited

Printed References

- California Department of Resources Recycling and Recovery. 2014a. *California's 75 Percent Initiative: Defining the Future*. Last Revised: November 3, 2014. Available: <http://www.calrecycle.ca.gov/75Percent/>. Accessed: December 29, 2014.
- . 2014b. *Facility/Site Summary Details: Fink Road Landfill (50-AA-0001)*. Last Revised: updated continuously. Available: <http://www.calrecycle.ca.gov/SWFacilities/Directory/50-AA-0001/Detail/>. Accessed: December 30, 2014.
- . 2014c. *Solid Waste Information System (SWIS) Facility/Site Listing: SWIS Sites in Stanislaus County*. Last Revised: updated continuously. Available: <http://www.calrecycle.ca.gov/SWFacilities/Directory/SearchList/List?COUNTY=Stanislaus>. Accessed: December 30, 2014.

City of Modesto and Modesto Irrigation District. 2011. *Joint 2010 Urban Water Management Plan*. Available: http://www.mid.org/water/uwmp/2010_final_modesto-MID_UWMP.pdf. Accessed: February 9, 2015.

Stanislaus Council of Governments. 2014a. *Draft Regional Housing Needs Plan for Stanislaus County 2014–2023*.

———. 2014b. *Regional Demographic Forecast*.

CEQA requires that an EIR examine a reasonable range of feasible alternatives to the project or the project location that could substantially reduce one or more of the project's significant environmental impacts while meeting most or all of its objectives. The EIR is required to analyze the potential environmental impacts of each alternative, though not at the same level of detail as the project. However, there must be sufficient detail to be able to compare the respective merits of the alternatives. The key provisions of State CEQA Guidelines Section 15126.6 that relate to alternatives analyses are summarized below.

- The discussion of alternatives shall focus on alternatives to the project or project location that are feasible, would meet most or all of the project objectives, and would substantially reduce one or more of its significant impacts.
- The range of alternatives must include the No Project Alternative. The no project analysis will discuss the existing conditions at the time the NOP was published, as well as conditions that would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. The No Project Alternative is not required to be feasible, meet any of the project objectives, or reduce the project's expected impacts to any degree.
- The range of alternatives required is governed by a "rule of reason." The EIR must evaluate only those alternatives necessary to permit a reasoned choice. An EIR is not required to analyze every conceivable alternative to a project.
- An EIR does not need to consider an alternative that would not achieve the basic project objectives, whose effects cannot be reasonably ascertained, and whose implementation is remote and speculative.

4.1 Project Objectives

The essential goal of the project is to update the Stanislaus County General Plan and ALUCP. This is represented by the following objectives.

- To comprehensively review and amend the general plan to incorporate current requirements of State law related to planning issues.
- To avoid making changes to the General Plan land use diagram.
- To update existing and incorporate new goals, objectives, policies, and implementation measures to reflect local changes in land use policy.
- To update technical data found within the general plan and support documents.
- To update the Airport Land Use Compatibility Plan to ensure consistency with the general plan, incorporate the requirements of the Caltrans' *Airport Land Use Planning Handbook*, and reflect new information relating to noise contours, safety zones, airspace protection zones, overflight areas, and current city general plan provisions.

- To prepare the environmental documentation necessary to support adoption of the general plan update and ALUCP.

4.2 Significant Impacts

Alternatives provide a means of reducing the level of one or more significant impacts that would otherwise result from implementation of the project. The following significant impacts would result from the project.

4.2.1 Aesthetics

- New source of substantial light or glare

4.2.2 Air Quality

- Construction-related emissions in excess of SJVAPCD thresholds

4.2.3 Biological Resources

- Interfere with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

4.2.4 Cultural Resources

- Adverse change in the significance of a historical resource.
- Adverse change in the significance of an archaeological resource.

4.2.5 Geology, Soils, and Paleontological Resources

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

4.2.6 Hydrology and Water Quality

- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level.

4.2.7 Noise

- Result in excessive levels of noise in the future at existing residences.

4.2.8 Recreation

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated.

4.2.9 Transportation and Traffic

- Result in traffic operations below the minimum acceptable thresholds on roadways outside the County's jurisdiction.
- Create additional vehicle, bicycle or pedestrian travel on roadways or other facilities that do not meet current design standards.

4.2.10 Utilities and Service Systems

- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

4.3 Methodology and Screening Criteria

A range of potential alternatives was developed and subjected to the screening criteria. The EIR preparers considered several representative alternatives. There was no attempt to include every conceivable alternative. The following criteria were used to screen potential alternatives.

- Does the alternative meet most or all of the project objectives?
- Is the alternative potentially feasible?
- Would the alternative substantially reduce one or more of the significant impacts associated with the project?

Based on the State CEQA Guidelines, "feasible" is defined as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors" (Section 15364). CEQA does not require that an EIR determine the ultimate feasibility of a selected alternative, but rather that an alternative be potentially feasible. Accordingly, no economic studies have been prepared regarding the economic feasibility of the selected alternatives.

The significant effects of the project may include those that are significant and unavoidable, or that are less than significant with mitigation. The alternative should provide a means of reducing the level of impact that would otherwise result from implementation of the project.

Those alternatives that meet the project objectives, that are potentially feasible, and that would reduce one or more project impacts are discussed in greater detail below.

4.4 Alternatives Considered but Rejected

Alternative locations. This prospective alternative would be to approve the general plan elsewhere than Stanislaus County. This alternative is legally infeasible for the following reasons. The general plan and ALUCP updates must occur within Stanislaus County. Both are state-mandated plans that are the County's and County Airport Land Use Commission's responsibilities to adopt and that must address the lands within the county and within the planning areas of the county's airports, respectively. The ALUCP update is further constrained by requirements to integrate noise contours, airport safety, airspace protection zones, and airport overflight areas into the plan for each of the airports in the county. Consideration of alternative airport locations is outside the scope of this update.

Project without ALUCP Amendments. This prospective alternative would carry forth the general plan update only, without the proposed amendments to the ALUCP. Updating the ALUCP to conform to the current *Airport Land Use Planning Handbook* is a fundamental objective of the project. This alternative fails to meet that objective and is rejected for that reason. In addition, it would not provide the County with a legally adequate ALUCP and is therefore infeasible for legal reasons.

4.5 Alternatives Analyzed in this EIR

The following alternatives are analyzed in this EIR. With the exception of the No-Project Alternative, they are variations on the general plan and ALUCP updates that would reduce one or more of the significant effects associated with the updates. As allowed under CEQA, they are analyzed at a lesser level of detail than the plan update itself. The project is oriented toward policy amendments and does not change any general plan land use maps. Similarly, the following alternatives are policy-oriented and do not include changes to the general plan's land use map.

4.5.1 Alternative 1—No Project Alternative

The No Project Alternative would consist of not adopting the proposed general plan and ALUCP updates. The County's future development would continue to be guided by the existing adopted plans and their policies. As with the project, there would be no site-specific changes in existing land use designations or zoning. Because the level and pattern of development would be substantially the same under both the project and the No Project Alternative, the key differences between the two are the proposed new goals, policies, and implementation measures being proposed by the project.

Typically, when the project under CEQA review is a site-specific development project, the no-project alternative has fewer impacts than the project. The proposed updates to the general plan and ALUCP, however, do not include site-specific development projects. With the exception of some changes to the boundaries of airport influence areas under the ALUCP, the project is policy based.

As a result, some of the impacts under the No Project Alternative are more intensive than the project because the alternative lacks project components that help reduce its impacts. These components include such items as complete streets policies, residential rezonings that are conditioned on annexation to service districts, and an implementation measure to include habitat protection mitigation measures where ground-disturbing activities will potentially impact undisturbed riparian habitat and/or vernal pools or other sensitive areas.

Impact Analysis

Aesthetics

Development under the No Project Alternative (i.e., the existing general plan) would result in changes in the visual character of portions of Stanislaus County where residential, commercial, or other land uses replace open agricultural lands. This impact would be significant and unavoidable.

Agricultural Resources

Development under the No Project Alternative would result in the conversion of agricultural land to other uses. The 2010–2012 Land Use Conversion Summary indicates that conversion of agricultural land to urban use is occurring slowly (California Department of Conservation 2013). Much of the conversion is occurring within or adjacent to the incorporated cities. The impact of the No Project Alternative is less than significant. The project would have a similar impact.

Air Quality

The No Project Alternative would allow development in accordance with the existing general plan, resulting in significant and unavoidable impacts on air quality from increased development and traffic. The project would have a similar impact.

Biological Resources

The No Project Alternative would allow development in accordance with the existing general plan. The resultant expansion in the footprint of developed land would result in the loss of wildlife habitat. The impact would be significant and unavoidable. The project would have a similar impact.

Cultural Resources

The No Project Alternative would allow development in accordance with the existing general plan. Development that does not require a discretionary permit can proceed without CEQA analysis and is not subject to the admonishment to avoid destroying significant cultural resources whenever feasible. As a result, the future loss of cultural resources that would be eligible for the CRHR or NRHP and thereby significant for CEQA purposes, but that is not subject to a discretionary permit, cannot be avoided. This would be a significant and unavoidable impact. The project would have a similar impact.

Geology, Soils, and Paleontology

The No Project Alternative would allow development in accordance with the existing general plan. Statutory and regulatory requirements under the California Building Codes will avoid potential impacts due to geology and soils. This alternative would have a less-than-significant impact. The project's impact would be similar.

Greenhouse Gas Emissions and Energy

The No Project Alternative would allow development in accordance with the existing general plan, resulting in additional development and increased traffic. The No Project Alternative's resulting impact on greenhouse gas emissions is reasonably foreseeable to be significant. The proposed project would have a lesser impact, although it would still be significant and unavoidable, due to its

integration of some of the GHG reduction policies of StanCOG's RTP/SCS and policies related to complete streets that will encourage bicycle and pedestrian trips in favor of short vehicle trips.

California's strict statutory and regulatory energy conservation standards have resulted in California having the second lowest per capita energy use in the nation (U.S. Energy Information Administration 2014). Vehicle fuel use will decrease in the future due to increasingly stringent auto and truck fleet fuel efficiency standards. Future development under the general plan will be required to meet these standards and therefore will not be inefficient, wasteful, or unnecessary in its use of energy.

Hazards and Hazardous Materials

The No Project Alternative would allow development in accordance with the existing general plan. This could expose a small number of future residences to 200-year flood hazard, a significant and unavoidable impact. Hazardous materials handling and storage is subject to state and federal requirements, as administered and enforced by the County Environmental Resources Department in its role as the Certified Unified Program Agency. The alternative's impact from hazardous materials would be less than significant. These impacts are essentially the same as the project's.

Hydrology and Water Quality

The No Project Alternative would allow development in accordance with the existing general plan. Development will occur in accordance with the requirements of the Central Valley RWQCB, so impacts on water quality from construction would not likely result in significant impacts. New development would require additional water supplies while the county is in a condition of groundwater overdraft. This would result in a significant and unavoidable impact on groundwater. This is the same impact as under the project.

Land Use and Planning

The No Project Alternative would allow development in accordance with the existing general plan. It would not result in land use conflicts or divide existing communities. The impact would be less than significant. This is the same impact as under the project.

Mineral Resources

The No Project Alternative would allow development in accordance with the existing general plan. The general plan contains policies protecting known mineral resources (see Policies Twenty-Six and Twenty-Seven of the Conservation/Open Space Element). This alternative would not result in a foreseeable impact on mineral resources. This is the same impact as under the project.

Noise

The No Project Alternative would allow development in accordance with the existing general plan. Increased levels of traffic on new and existing roads will increase noise levels along those roads. This will result in significant and unavoidable noise impacts on sensitive receptors that are located close to those roads. This would be a significant and unavoidable impact. This is the same impact as under the project.

Population and Housing

The No Project Alternative would allow development in accordance with the existing general plan. This would result in a significant and unavoidable impact on population growth. The general plan does not require the removal or displacement of any housing. Therefore, that impact would be less than significant. This is the same impact as under the project.

Public Services

The No Project Alternative would allow development in accordance with the existing general plan. New public facilities will need to be built to accommodate the increased population. Some of these facilities have the potential to result in significant and unavoidable impacts. Therefore, this alternative would have a significant and unavoidable impact on public services. This is the same impact as under the project.

Recreation

The No Project Alternative would allow development in accordance with the existing general plan. Because the County imposes requirements for park and recreation facilities on new subdivisions, the impact is expected to be less than significant. This is the same impact as under the project.

Transportation and Traffic

The No Project Alternative would allow development in accordance with the existing general plan. New housing and commercial/industrial development will result in additional vehicles being added to the road system. This would be a significant and unavoidable impact on those portions of the road system where traffic congestion increases to unacceptable levels. This impact would be greater than the Project's impact on transportation and traffic due to the project's inclusion of new road standards, complete streets policies, and conformity with the Sustainable Communities Strategy. All three of those components will encourage the use of alternative modes of transportation and reduce automobile use in comparison to Alternative 1. The impact of the project would be significant, nonetheless.

Utilities and Service Systems

The No Project Alternative would allow development in accordance with the existing general plan. This development is likely to exceed the capacity of water and wastewater treatment facilities in some parts of the county. This impact would be significant and unavoidable. This is the same impact as under the project.

4.5.2 Alternative 2—Reduced Developable Area

This alternative would reduce the area of the county that is designated for residential or urban development. This would reduce the general plan's impacts on agricultural conversion, biological resources, and traffic. Those undeveloped or underdeveloped areas of the county with residential, commercial, and other urban planning designations include the communities of Del Rio, Denair, Diablo Grande, Keyes, Salida, and Westley. Measure E (enacted by voter initiative in 2008) requires that any redesignation or rezoning of land in the unincorporated area from agricultural or open space use to a residential use must be approved by a majority vote of the county voters at a general or special local election. The planning strategies of the Stanislaus County General Plan must reflect

the requirements of Measure E. The unincorporated communities of Crows Landing, Knights Ferry, and La Grange have little or no capacity for additional growth.

Under this initiative, the future development potential for the communities of Del Rio, Denair, Keyes, and Westley would be reduced. Both Diablo Grande and Salida are subject to approved entitlements that limit the County from “down zoning” them to reduce urban densities. Furthermore, the Salida Community Plan was adopted by voter initiative. As a result, it cannot be changed except by another popular vote at a county-wide election. The County cannot reduce development density within Salida through the general plan amendment process.

There are substantial undeveloped areas in Del Rio, Denair, Keyes, and Westley. Alternative 2 would include all of the proposed amendments to the General Plan and ALUCP, but would add new policies to each of these community plans to restrict new residential development projects on all vacant, agriculturally zoned lands to the residential use allowed in the particular agricultural zone. This would effectively preclude large scale residential subdivisions and limit development to single-family residences on lots meeting the minimum parcel size.

- Del Rio is a residential development centered on the Del Rio Golf and Country Club. It is located north of Ladd Road, north of the City of Modesto and west of the City of Riverbank. There is an undeveloped area directly south of the San Joaquin River that is designate for residential use at a density of up to one dwelling per two acres. Lands on the eastern side of the Community Plan are designated for residential use at densities of one dwelling per acre and one dwelling per two acres. However, it is currently in agricultural use. The southern portion of the Del Rio Community Plan area (Area II) is similarly identified for future residential development at those densities and is in agricultural use. It is also zoned for agriculture (A-2-40).
- Denair is an urbanized community located east of the City of Turlock, and separated from the city by agricultural land. In keeping with its small town character, the Community Plan includes commercial, medium-density residential, low-density residential, and estate residential land use designations. Undeveloped parts of the west side of the Community Plan area are designated for residential use at densities of one dwelling per three acres (ER – Estate Residential) and zero to seven dwellings per acre (LDR – Low Density Residential). Substantial portions of these areas are zoned for agricultural use (A-2-10 and A-2-40). Undeveloped areas in the northeast quadrant of the Community Plan are designated for ER and LDR use and are zoned for agricultural use (A-2-10). Similarly, vacant land in the southeast quadrant of the planning area is designated for ER development, but is zoned for agriculture (A-2-10).
- Keyes is an urbanized community located on both sides of Highway 99 located between the cities of Ceres and Turlock. The Community Plan includes a variety of land use designations including industrial, highway commercial, commercial, and medium- and low-density residential. Undeveloped parts of the north side of the planning area are designated for LDR and urban transition land use, but are zoned agricultural (A-2-10 and A-2-40). Vacant lands on the southern side of the planning area are designated for planned industrial and highway commercial land uses, but are zoned A-2-10 and A-2-40.
- Westley is a small, rural community located along Highway 33, about 4 miles north of the City of Patterson. Most of Westley’s planning area is designated for residential development, with the portion fronting on Highway 33 designated for commercial and industrial use. The northwest quadrant of the planning area is currently in agricultural use and is zoned for agriculture (A-2-10).

Impact Analysis

Aesthetics

Alternative 2 would result in changes in the visual character of portions of Stanislaus County where residential, commercial, or other land uses replace open agricultural lands. This impact would be significant and unavoidable. However, because the potential for residential development under Alternative 2 is less than the Project, there would be less change in the visual character of Del Rio, Denair, Keyes, and Westley than under the Project and this alternative would have a less severe impact than the Project.

Agricultural Resources

Development under Alternative 2 will result in the conversion of agricultural land to other uses. The 2010–2012 Land Use Conversion Summary indicates that conversion of agricultural land to urban use is occurring slowly (California Department of Conservation 2013). Much of the conversion to urban use is occurring within or adjacent to the incorporated cities. The project discourages development on unincorporated land within Stanislaus County. Alternative 2 would provide additional support for those policies by precluding residential development on substantial amounts of agricultural land within these four community plan areas. New residential development within the community plan areas would be limited to rehabilitation and infill. The impact of Alternative 2 is less than significant. This is a lesser impact than the project.

Air Quality

Alternative 2 would allow new development that would contribute to criteria pollutant emissions. Although, like the project, Alternative 2 would encourage new development that facilitates bicycling and pedestrian travel in place of automobiles for short trips, the effectiveness of the policies to result in a substantial reduction in emissions over what could occur absent those policies is unknown. As a result, Alternative 2 would foreseeably result in significant and unavoidable impacts on air quality from increased development and traffic. However, Alternative 2 would reduce the amount of residential development that could occur within the four community plan areas and thereby marginally reduce traffic and traffic-related air pollutant emissions. Alternative 2 would have a lesser impact than the project.

Biological Resources

Alternative 2 would reduce the area available for residential development in comparison to the project. New development would still occur with the potential to remove wildlife habitat. This alternative would reduce the potential effects of new development in comparison to the project, but would still represent a significant and unavoidable impact.

Cultural Resources

Alternative 2 would allow development in locations similar to the existing general plan. Development that does not require a discretionary permit can proceed without CEQA analysis and is not subject to CEQA's admonishment to avoid destroying significant cultural resources whenever feasible. As a result, the future loss of cultural resources that would be eligible for the CRHR or NRHP and thereby significant for CEQA purposes, but that is not subject to a discretionary permit,

cannot be avoided. This would be a significant and unavoidable impact. The project would have a similar impact.

Geology, Soils, and Paleontology

Alternative 2 would allow development in accordance with the existing building codes. Statutory and regulatory requirements under the California Building Codes for site testing and geotechnical report preparation where needed to avoid adverse effects on new development will avoid potential impacts due to geology and soils. This alternative would have a less-than-significant impact with Mitigation Measures GEO-2a and 2b. The project's impact would be similar. Alternative 2 would have the potential to disrupt paleontological resources, although to a lesser degree than the project because Alternative 2 reduces the amount of land available for future residential development. With Mitigation Measure GEO-6, the impact of Alternative 2 would be less than significant.

Greenhouse Gas Emissions and Energy

Alternative 2 would incorporate into the general plan those policies of the RTP/SCS that are reasonably within the County's authority to enforce. In addition, because it reduces the potential for residential development in the four community plan areas, this alternative would reduce GHG emissions and energy use in comparison to the project. However, Alternative 2 would still increase net greenhouse gas emissions over existing conditions and therefore have a significant effect.

California's strict statutory and regulatory energy conservation standards have resulted in California having the second lowest per capita energy use in the nation (U.S. Energy Information Administration 2014). Vehicle fuel use will decrease in the future due to increasingly stringent auto and truck fleet fuel efficiency standards. Future development under Alternative 2 would be required to meet these standards and therefore would not be inefficient, wasteful, or unnecessary in its use of energy. This would be the same less-than-significant impact as the project.

Hazards and Hazardous Materials

Alternative 2 would allow development in locations generally in accordance with the general plan. This could expose a small number of future residences to 200-year flood hazard, a significant and unavoidable impact. Hazardous materials handling and storage is subject to state and federal requirements, as administered and enforced by the County Environmental Resources Department in its role as the Certified Unified Program Agency. The alternative's impact from hazardous materials would be less than significant. These impacts are the same as the project's.

Hydrology and Water Quality

Alternative 2 would reduce the extent of development allowed under the existing general plan. Development will occur in accordance with the requirements of the Central Valley RWQCB, so impacts on water quality from construction would not likely result in significant impacts. New development would require additional water supplies while the county is in an existing condition of groundwater overdraft. This would result in a significant and unavoidable impact on groundwater. However, because the amount of development is less than under the project, this alternative would have a somewhat smaller impact than the project.

Land Use and Planning

Alternative 2 would reduce the extent of development allowed under the existing general plan. It would not result in land use conflicts or divide existing communities. The impact would be less than significant.

Mineral Resources

Alternative 2 would allow reduce the extent of development allowed under the existing general plan. The general plan contains policies protecting known mineral resources (see Policies Twenty-Six and Twenty-Seven of the Conservation/Open Space Element). This alternative would not result in a foreseeable impact on mineral resources. Its impact would be the same as the project's.

Noise

Alternative 2 would reduce the extent of development allowed under the existing general plan. Increased levels of traffic on new and existing roads would increase noise levels along those roads, and would foreseeably result in significant and unavoidable noise impacts on sensitive receptors located close to those roads. This would be a significant and unavoidable impact. Because it the potential for new residential development, the alternative would generate somewhat less traffic, would introduce fewer residences to traffic noise (although traffic noise would not be expected to be severe in these portions of the community plan areas), and therefore have a lesser impact than the project.

Population and Housing

Alternative 2 would reduce the extent of development allowed under the existing general plan. It will not, however, stop growth within Diablo Grande, Salida, and on rural lots. This would result in a significant and unavoidable impact on population growth. The general plan does not require the removal or displacement of any housing. Therefore, that impact would be less than significant. Over time, this alternative's reduction in residential development potential may hinder the county's ability to meet its future regional housing needs allocations. For that reason, the impact of this alternative is greater than the project's.

Public Services

Alternative 2 would reduce the extent of development allowed under the existing general plan. New public facilities would need to be built to accommodate the increased population, but fewer facilities would be needed than necessary to serve the project. Some of these facilities would have the potential to result in significant and unavoidable impacts. Therefore, this alternative would have a significant and unavoidable impact on public services, but to a lesser degree than the project.

Recreation

Alternative 2 would reduce the extent of development allowed under the existing general plan. Because the County imposes requirements for park and recreation facilities on new subdivisions, the impact is expected to be less than significant. This impact would be the same as the project's.

Transportation and Traffic

Alternative 2 would reduce the extent of development allowed under the existing general plan. Nonetheless, new housing and commercial/industrial development would result in additional vehicles being added to the road system. This would be a significant and unavoidable impact on those portions of the road system where traffic congestion increases to unacceptable levels. By virtue of its smaller development potential, Alternative 2 would generate somewhat less traffic than the proposed project.

Utilities and Service Systems

Alternative 2 would reduce the extent of development allowed under the existing general plan. Nonetheless, development would likely exceed the capacity of water and wastewater treatment facilities in some parts of the county, requiring the installation and operation of new facilities that could result in significant effects. This impact would be significant and unavoidable. By virtue of its smaller development potential, Alternative 2 would require fewer facilities than the proposed project and its impact would be proportionally less than the project.

4.6 Environmentally Superior Alternative

CEQA requires an EIR to examine a range of feasible alternatives to the project. State CEQA Guidelines Section 15126.6(e)(2) requires that the EIR identify which of those alternatives is the environmentally superior alternative. If the No-Project Alternative is the environmentally superior alternative, then CEQA requires an EIR to identify which of the other alternatives is environmentally superior.

Based on the assessment included in this chapter, Alternative 2—Reduced Developable Area, would be considered the environmentally superior alternative because it would result in lesser impacts in relation to the project in several resource areas. In comparison to the project, this alternative somewhat reduces impacts on aesthetics, air quality, biological resources, greenhouse gas emissions, hydrology and water quality, noise, public services, transportation and traffic, and utilities and service systems. However, many of those impacts would be significant and unavoidable even under Alternative 2. Table 4-1 compares the impacts of the alternatives (considered to be the change from existing conditions) to the severity of that impact in comparison to the project.

Table 4-1. Comparison of Alternatives' Environmental Impacts

Impact Topic	Alternative 1—No Project		Alternative 2—Reduced Developable Area	
Aesthetics	SU	(S)	SU	(L)
Agricultural Resources	LTS	(S)	LTS	(L)
Air Quality	SU	(S)	SU	(L)
Biological Resources	SU	(S)	SU	(L)
Cultural Resources	SU	(S)	SU	(S)
Geology, Soils, and Paleontology	LTS	(S)	LTS	(S/L)
Greenhouse Gas Emissions and Energy	SU	(G)	SU	(L)
	LTS	(S)	LTS	(S)
Hazards and Hazardous Materials	SU	(S)	SU	(S)
			LTS	(S)
Hydrology and Water Quality	SU	(S)	SU	(L)
Land Use and Planning	LTS	(S)	LTS	(S)
Mineral Resources	LTS	(S)	LTS	(S)
Noise	SU	(S)	SU	(L)
Population and Housing	SU	(S)	SU	(G)
Public Services	SU	(S)	SU	(L)
Recreation	LTS	(S)	LTS	(S)
Transportation and Traffic	SU	(G)	SU	(L)
Utilities and Service Systems	SU	(S)	SU	(L)

(G) = impact greater than the project
(L) = impact less than the project
(S) = impact the same as the project

4.7 References Cited

Printed References

- California Department of Conservation. 2013. Division of Land Resource Protection. *Table A-41. Stanislaus County 2010–2012 Land Use Conversion. Farmland Mapping and Monitoring Program.* <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Stanislaus.aspx>. Accessed: December 28, 2014.
- U.S. Energy Information Administration. 2014. *California Energy Profile*. Last updated: July 17, 2014. Available: <http://www.eia.gov/state/print.cfm?sid=CA>. Accessed: December 30, 2014.

5.1 Overview

This chapter contains discussions of additional topics required by CEQA, including cumulative impacts, growth inducing impact, significant and unavoidable impacts, and significant irreversible environmental changes.

5.2 Cumulative Impacts

Cumulative impacts result from individually minor, but collectively significant, impacts occurring over a period of time. In other words, a cumulative impact results from the collective effects on a resource by numerous activities over time.

State CEQA Guidelines Section 15130 requires that an EIR include a discussion of the potential cumulative impacts of a proposed project. Cumulative impacts are defined as two or more individual effects that, when considered together, are significant. The cumulative impact is the change in the environment that results from the incremental impact of the development when added to the incremental impacts of other closely related past, present, and reasonably foreseeable or probable future activities.

As defined in State CEQA Guidelines Section 15355, "...a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact."

An adequate discussion of significant cumulative impacts is based on either:

- A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or
- A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document, which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

The cumulative impact analysis in this EIR relies upon the projections approach. Unless so stated, it considers the potential for the project to make significant contributions to cumulative impacts at the horizon year of the General Plan in 2035.

The determination of a project's cumulative effects involves identifying the following:

- Significant impacts that are the result of the cumulative contributions of past, present, and reasonably probable future activities. CEQA does not require analysis of cumulative effects that are less than significant.
- Whether the project would contribute to any of those cumulative impacts. The EIR is not required to analyze a cumulative impact to which the project would not contribute.
- Whether, in the context of the cumulative impact, the project's contribution would be considerable – that is, significant, in cumulative terms. A project impact that is less than significant by itself may nonetheless make a considerable contribution in the context of a cumulative impact.

The following significant cumulative impacts are present or will be present in Stanislaus County during the 2035 planning period.

- Agricultural resources—conversion of land to non-agricultural uses
- Air quality—worsening air quality
- Biological resources—habitat and movement corridor losses
- Noise—increase in noise along roads
- Recreation—shortage of park lands
- Traffic—marginal increase in congestion
- Water resources—groundwater overdraft

5.2.1 Agricultural Resources

As discussed in Section 3.2, Agricultural Resources, agriculture is an important part of the economy and environment of Stanislaus County. Since the FMMP began recording changes in land use in 1984, it has documented a steady trend of farmland conversion throughout the San Joaquin Valley. In Stanislaus County, this has largely affected areas adjoining the cities of Modesto, Ceres, and Patterson, including unincorporated Salida.

FMMP data for the period between 1984 and 2012 indicates that a substantial amount of prime farmland was converted to other non-agricultural uses each year. During that period approximately 42,308 acres of prime farmland were converted to other uses. This trend is expected to continue into the future as the cities grow pursuant to their general plans and development occurs in the Salida community. The 2014 Regional Transportation Plan/Sustainable Communities Strategy estimates that by 2040 development within the county, including the incorporated cities, will consume approximately 13,550 acres of prime farmland. (Stanislaus Council of Governments 2014)

In response to the loss of farmland, Stanislaus County has adopted general plan policies intended to minimize the conversion of agricultural land and to encourage continued agricultural activity (see Section 3.2, Agricultural Resources). The Stanislaus County LAFCO has similarly adopted policies to discourage the premature conversion of agricultural land to urban uses. Further, county voters enacted Measure E in November 2007, which provides that land designated as agricultural or open space in the Land Use Element cannot be amended to residential or rezoned to residential use without the approval of a majority of county voters. These policies are intended to direct new

development away from unincorporated agricultural areas and into the cities or lands within cities' spheres of influence.

The provisions of the general plan, Measure E, and the Stanislaus LAFCO policies all act to reduce the potential for development under the general plan to result in the conversion of prime agricultural land to other uses. In particular, Measure E restricts the future conversion of much of the lands adjoining the unincorporated communities. However, future development in the community of Salida, which is located on prime agricultural land, will result in the conversion of that land. Salida's development is based on a 2007 voter-enacted initiative that adopted the Salida Community Plan and related development entitlements. It is not related to, nor can it be altered by, the project.

The project does not propose new zoning or changes to the land use map or the existing boundaries of the land use designations. Additionally, the ALUCP proposes changes to policies that would not affect current land use patterns. Furthermore, any development projects proposed in agricultural areas of the county would continue to be reviewed for consistency, thereby ensuring that they would not lead to the conversion of land from agricultural use to residential, commercial, or other uses that would be inconsistent with existing agricultural production. This review includes abiding by county Measure E, which requires a majority of voters to approve the rezoning or redesignation of land uses from agricultural to residential. Therefore, the project would not make a considerable contribution to the cumulative impact on agricultural resources.

5.2.2 Air Quality

The analysis in Chapter 3.3, Air Quality, is an examination of both the project's individual and cumulative impacts. This is because the analysis considers the project's contribution to future air emissions within the entire San Joaquin Valley Air Basin, based on the air quality planning efforts and thresholds of significance of the SJVAPCD. As discussed in Chapter 3.3, future construction under the General Plan, including the amendments contained in the project, would have a significant and unavoidable impact on air quality. The project would therefore make a considerable contribution to cumulative conditions.

5.2.3 Biological Resources

A significant cumulative impact on fish and wildlife movement exists due to the loss of riparian habitat along the Stanislaus and Tuolumne Rivers as a result of prior development, the narrowing of the movement corridor west of I-5 as a result of that highway, and future projects within the county, including those in the incorporated cities and on lands within the cities' spheres of influence, reflected in the county and city general plans.

The cities' general plans provide for future growth into areas, such as the Stanislaus River, Tuolumne River, and Dry Creek corridors, that are currently undeveloped and provide movement corridors for fish and wildlife. Unincorporated areas planned for future development around East Oakdale, Del Rio, Salida, and the planned highway commercial development at I-5 and Howard Road could interfere with the movement of fish and wildlife through encroachment upon the riparian corridors of the Stanislaus River (East Oakdale, Del Rio, and Salida) and with the movement of wildlife, in particular San Joaquin kit fox, west of I-5 (highway commercial development). Infill development in the unincorporated area adjoining Modesto could affect wildlife movement along the Tuolumne River.

Considering the past and future loss of riparian habitat and the proximity of development and agricultural lands to these rivers, and the already narrow movement corridor west of I-5, the impacts from the project on wildlife movement corridors would be cumulatively considerable.

5.2.4 Noise

Impact NOI-1 in section 3.12 describes the significant cumulative noise impact of future development. The projected traffic noise levels shown in Table 3.12-14 are based on noise modeling that considers future development under the county and city general plans and the related increase in traffic resulting from that planned development. Noise levels along several road segments are forecasted to exceed the county's noise standards, resulting in a cumulative impact.

New residences and other noise-sensitive land uses constructed on roadway segments with traffic that equals or exceeds 60 L_{dn} will not be exposed to excessive noise. Implementation Measure 1 in the general plan Noise Element will limit the exposure of new noise-sensitive development to traffic noise to a level determined to be acceptable by the county. Noise impacts from traffic on new development would be avoided and the project's contribution is therefore not cumulatively considerable.

However, the project, by virtue of increasing traffic and the resultant noise along roadway segments, will expose existing noise sensitive land uses to excessive noise levels along the road segments identified in Table 3.12-14. The County does not have a program for mitigating noise impacts affecting existing sensitive receptors. Therefore, this impact would be cumulatively considerable.

5.2.5 Recreation

Projects that involve residential development would increase the park-user population in the county. To maintain adequate service ratios, the construction or expansion of park facilities would be required, which would have the potential to result in an adverse impact on the environment. Other jurisdictions will also build new or expand existing park and recreation facilities.

Projects that involve residential development have the potential to increase the use of existing neighborhood and regional parks. An increase in the use of existing neighborhood parks would have the potential to accelerate the physical deterioration of recreational facilities substantially. Three of the four largest cities in the county, Modesto, Ceres, and Riverbank, all face a shortfall in neighborhood and/or community parks. Oakdale has an adequate amount of parkland.

Modesto has more total acres of parkland than the city's general plan requires, but it does not meet the minimum acreage requirement for neighborhood parkland. According to the city's general plan, the city should have two acres of neighborhood parks and one acre of community parks per 1,000 residents (City of Modesto 2008a:V30). The city currently has 328 acres of neighborhood parks and 442 acres of community parks, totaling 770 acres (Gallagher pers. comm.). Based on the 2013 population of 204,933 residents (U.S. Census Bureau 2014c), the city should have approximately 410 acres of neighborhood parks and 205 acres of community parks, or a total of 615 acres of parks.¹

¹ $204,933/1,000=204.93$ ($204.93*2=409.86$ acres of neighborhood parks; $204.93*1=204.93$ acres of community parks).

Ceres also faces a shortage in neighborhood and community parks. The city's general plan requires 1.4 acres of neighborhood parks and 2.6 acres of community parks per 1,000 residents (City of Ceres 1997:5-2). It has 38 acres of neighborhood parks and 85 acres of community parks (Butler pers. comm.). With a 2013 population of 46,714 (U.S. Census Bureau 2014a), it should have 65 acres of neighborhood parks and 121 acres of community parks.²

Riverbank had approximately 88 acres of city parkland in 2008 but should have had a total of 99 acres to meet its general plan standard of five acres per 1,000 residents (EDAW 2008:4.14-7).

Oakdale has an adequate amount of parkland, with 143 acres of existing parks (Clark pers. comm.). With 21,469 residents (U.S. Census Bureau 2014b) and a general plan standard of five acres per 1,000 residents (City of Oakdale 2013:CS-8), it should have a minimum of 107 acres.³

In some instances, such as a regional park, the park has the potential to contribute to a significant cumulative impact, such as a traffic, noise, or biological resources impact. It is reasonably foreseeable that a large park could make a considerable contribution to a cumulative impact, such as a traffic, noise, or biological resources impact, where a cumulative impact exists or would occur. The potential for cumulative impacts is increased by the contributions of future city park and recreation facilities. Thus, this impact of the general plan update would be cumulatively considerable.

Growth within the county would result in a need for additional neighborhood parks. Any new subdivisions would need to comply with Policy Twelve of the general plan and provide three acres of neighborhood parks per 1,000 residents. Implementation of this policy would avoid a cumulatively considerable contribution.

5.2.6 Traffic/Transportation

Based on the StanCOG model estimate of vehicle trips in Stanislaus County, build-out of the General Plan to 2035 would result in the unincorporated area generating approximately 34% of the total VMT generated in Stanislaus County (excluding regional through trips). The impacts of planned development in the unincorporated area represent a portion of the total vehicle trips on the roadway network that will contribute to increases in daily traffic volumes. The general plan update would change the standard to peak hour LOS D for county roadways and LOS C at all county intersections, while retaining the exception for roads within the sphere of influence of a city. Based on the LOS identified in Table 3.16-2, no county roadways would exceed the LOS standard. There is no significant cumulative traffic impact on county roads. Therefore, the contribution of the general plan update is not considerable.

Development under the General Plan, as amended by the project, will contribute to future congestion on the state highway system on segments of SR 120, Hwy 99, and SR 132 exceeding the concept level LOS in the Caltrans "Transportation Concept Reports" for SR 108, SR 120, and SR 132 and the "Corridor System Management Plan" for Hwy 99. (California Department of Transportation 2014a, 2014b, 2011a, 2011b) The forecasted levels of congestion, based on the Three-County Model travel demand model, are illustrated in Table 3.16-2. This is a significant cumulative impact.

² $46,714/1,000=46.71$ ($46.71*1.4 = 65.4$ acres of neighborhood parks; $46.71*2.6= 121.45$ acres of community parks).

³ $21,469/1,000=21.47$ ($21.47*5=107$ acres).

Future congestion on the state highway system will result from traffic generated within the county, including the incorporated cities, and traffic that is traveling through the county. The project will not have a significant individual impact on the system, but it will make a considerable contribution to the cumulative impact on the state highway system. Current Circulation Element Goal Two, Policy Nine and the associated implementation measures commit the county to coordinating with other agencies to upgrade existing state highways. This will reduce the county's contribution, but not to the extent that it will not be considerable.

5.2.7 Water Supply

Groundwater overdraft from pumping and drought conditions is an ongoing problem in Stanislaus County. Past increases in population and corresponding increases in groundwater use, combined with agricultural demands on the groundwater supply, have resulted in a lower groundwater table in some areas of the Modesto Subbasin and may have contributed to groundwater degradation, especially within the boundaries of the City of Modesto. The 2014 Regional Transportation Plan/Sustainable Communities Strategy estimates that by 2035 the county population (including the incorporated cities) will increase by 170,000 persons and 52,000 households (Stanislaus Council of Governments 2014). Future development under the county and city general plans, particularly in urban areas and the community of Salida, will result in increased demand and reliance on groundwater to supplement surface water supplies.

Impacts on groundwater from future development would be reduced by implementation of the general plan update. Implementation of the proposed amendment to Goal Two, Policy Eight of the Conservation/Open Space Element and the related amended and new Implementation Measures would result in the development of a groundwater usage tracking system, including well location/construction mapping (within the extent that prevailing law allows) and additional groundwater level monitoring, to guide future policy development. This tracking system would minimize the potential for additional overdraft that could result in subsidence and groundwater quality issues. In addition, statewide groundwater management legislation passed in 2014 (Assembly Bill 1739 and Senate Bill 1168) will result in the preparation of a regional groundwater management plan by water districts and Stanislaus County acting as the regional groundwater sustainability agency. This groundwater sustainability plan is anticipated to specify specific actions to avoid overdraft throughout each of the subbasins within the county within 20 years of the implementation of the plan. (Water Code Section 10727.2[b] and [d]) Proposed Implementation Measures 6 through 8 under Goal Two, Policy Eight would commit the County to regional cooperation in the preparation of the groundwater sustainability plan and the dissemination of groundwater information to guide future planning activities. Government Code Section 65352.5 requires the County to consider the groundwater sustainability plan, once it is adopted, whenever proposing to amend its general plan.

Groundwater depletion is a severe problem. Although most of the forecasted development within Stanislaus County will occur within its cities, development under the general plan and the general plan update will contribute to the ongoing and future problem during the 2035 planning period. Therefore, the project's contribution is considerable.

5.3 Growth Inducing Impact

CEQA requires a discussion of the ways in which the project would be growth-inducing. State CEQA Guidelines Section 15126.2(d) identifies a project as growth-inducing if it fosters economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. The project will not directly authorize new development and therefore will not directly induce growth. However, it could indirectly induce growth by removing barriers to growth, by creating a condition that attracts additional population or new economic activity, or by providing a catalyst for future growth in the area. While these proposals may have a potential to induce growth, they do not automatically result in growth. Growth can happen only through capital investment in new economic opportunities by the public or private sectors.

Typically, the growth-inducing potential of a project is considered significant if it fosters growth or a concentration of population in excess of the existing setting or baseline. Growth may be induced through the provision of infrastructure or service capacity that would accommodate new development.

By law, Stanislaus County is required to adopt “a comprehensive, long-term general plan for the physical development of the county” (Government Code Section 65300). The general plan’s housing element is required to include:

An identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, financial resources, and scheduled programs for the preservation, improvement, and development of housing. The housing element shall identify adequate sites for housing, including rental housing, factory-built housing, mobile homes, and emergency shelters, and shall make adequate provision for the existing and projected needs of all economic segments of the community. (Government Code Section 65583)

On a regular basis (now every 8 years), the Stanislaus Council of Governments (StanCOG) prepares the Regional Housing Needs Allocation and adopts the associated Regional Housing Needs Plan (RHNP) that establishes the share of projected future housing growth that Stanislaus County must accommodate in its general plan for the period of January 1, 2014, through September 30, 2023. Unincorporated Stanislaus County’s regional housing share under the 2014 RHNP totals 2,241 dwelling units for all income categories (Stanislaus Council of Governments 2014). By law, the general plan must include provisions for at least this level of growth. The current housing element is based on the prior assigned RHNP share and will be amended to account for the new allocations.

Based on the definition of growth inducement, a general plan is inherently growth-inducing because it must accommodate at least the projected housing demand set out in the RHNP. The current General Plan and the proposed project will provide the framework by which public officials will be guided in making decisions relative to future development in Stanislaus County.

5.4 Significant and Unavoidable Impacts

Section 15126.2(a)(b) of the State CEQA Guidelines requires an EIR to identify and focus on the significant environmental effects of the proposed project, including effects that cannot be avoided if the proposed project were implemented. Each of the preceding impact sections (3.1 through 3.17) has identified those significant impacts that cannot be reduced below a level of significance. The significant, unavoidable impacts are:

- Impact AES-3: Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area
- Impact AQ-1: Generate construction-related emissions in excess of SJVAPCD thresholds
- Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (including cumulatively considerable impact)
- Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5
- Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5
- Impact HYD-2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted) (including cumulatively considerable impact)
- Impact NOI-1: Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies (including cumulatively considerable impact)
- Impact REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated (including cumulatively considerable impact)
- Impact TRA-3: Result in traffic operations below the minimum acceptable thresholds on roadways outside Stanislaus County's jurisdiction (i.e., Caltrans facilities)
- Impact TRA-6: Result in transportation network changes that would prevent the efficient movement of goods within the county (including cumulatively considerable impact)
- Impact TRA-8: Create additional vehicle, bicycle, or pedestrian travel on roadways or other facilities that do not meet current county design standards
- Impact UTL-2: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Impact UTL -5: Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments

The reader is directed to the various impact sections in Chapter 3 of this EIR for a more detailed discussion of each of these significant, unavoidable impacts.

5.5 Significant Irreversible Environmental Changes Which Cannot Be Avoided if the Project is Implemented

State CEQA Guidelines Section 15126.2 requires that the EIR for a general plan amendment must address any significant irreversible environmental change that would result from implementation of that amendment. Specifically, per the Guidelines (Section 15126.2[c]), such an impact would occur if:

- The project would indirectly involve a large commitment of nonrenewable resources;
- Irreversible damage can result from environmental accidents associated with the project; and
- The proposed consumption of resources is not justified.

Approval and implementation of actions related to the project would be typical of these sorts of land use planning and regulatory actions. They will result in an irretrievable commitment of nonrenewable resources such as fossil fuel-based energy supplies and construction-related materials as a result of future development that would occur pursuant to the general plan update. The energy resource demands would be used for construction, heating and cooling of buildings, transportation of people and goods, heating and refrigeration, lighting, and other associated energy needs.

Environmental changes with implementation of the project would occur as the physical environment is altered through continued commitments of land and construction materials to urban and rural development. There would be an irretrievable commitment of labor, capital, and materials used in construction and a permanent loss of open space over time. Nonrenewable resources would be committed primarily in the form of fossil fuels and would include oil, natural gas, and gasoline used to support the additional development associated with implementation of the General Plan.

The consumption of other nonrenewable or slowly renewable resources would result from the development associated with the project. These resources would include, but are not be limited to, lumber and other forest products, sand and gravel, asphalt, steel, copper, and water. Although alternative energy sources such as solar, geothermal, or wind energy are in use in the county, the proportion of energy generated by these sources is so much smaller than the proportion generated by fossil fuel sources that it is unlikely that real savings in nonrenewable energy supplies (e.g., oil and gas) could be realized in the immediate future.

Development in unincorporated Stanislaus County as envisioned by the project would result in the construction of structures, facilities, or infrastructure on lands that are currently undeveloped. Development of lands generally would result in their future and permanent commitment to urban, suburban, or rural uses.

5.6 References Cited

California Department of Conservation. 2013. *Historic Land Use Conversion 1984 to Present*. Available: <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Stanislaus.aspx>. Accessed: April 2, 2015.

Stanislaus Council of Governments (StanCOG). 2014. *Final Regional Housing Needs Plan for Stanislaus County 2014-2023*. Modesto, CA. June 18.

Chapter 6

List of Preparers

Sally Lyn Zeff, AICP, MUP, Urban Planning, University of Michigan, 35 years of planning and environmental consulting experience. Contribution: Project Director.

Terry Rivasplata, AICP, B.S., Environmental Planning and Management, University of California, Davis, 38 years of planning and environmental consulting experience. Contribution: Senior Project Manager, and Agriculture, Hazards, Land Use, Population and Housing, Public Services, and Recreation sections.

Lindsay Christensen, Environmental Planner. B.S., Community and Regional Development, University of California, Davis; 11 years environmental planning experience. Contribution: Project Coordinator and Agriculture, Hazards, Land Use, Population and Housing, Public Services, and Recreation sections.

David Buehler, Acoustical Engineer. B.S., Civil Engineering, California State University, Sacramento. 34 years of noise analysis experience. Contribution: Noise section.

Joanne Grant, Archaeologist. M.A., Classical Archaeology, Florida State University, Tallahassee; 12 years cultural resources management experience. Contribution: Cultural Resources (Archaeology).

Shannon Hatcher, Air Quality, Climate Change, and Noise Project Manager. B.S., Environmental Science, Oregon State University; B.S., Environmental Health and Safety, Oregon State University; 15 years experience. Contribution: Air Quality and Climate Change Peer Review.

Darrin Trageser, Air Quality, Climate Change, and Noise Specialist. B.S., Atmospheric Science, University of Washington; M.S., Atmospheric Science, University of California, Davis; 1+ year experience. Contribution: Air Quality and Climate Change Analysis.

Ellen Unsworth, Geologist. M.S., Interdisciplinary Studies (Geology, Biology, and Technical Communication), Boise State University, 15 years experience. Contribution: Geology and Minerals sections.

Robert Rivasplata, Senior Associate, Fehr&Peers, B.A., History, University of California, Davis; 8 years environmental planning experience. Contribution: Utilities Section.

Kathrin Tellez, AICP, Senior Associate at Fehr & Peers. M.A., Urban Planning, University of California, Los Angeles, 15 years experience. Contribution: Traffic section.

Edward Yarbrough, Assoc. AIA, Senior Architectural Historian. M.S., Historic Preservation, University of Oregon; 25 years architectural history and historic preservation experience. Contribution: Cultural Resources (Architectural History).

Ken Cherry, Senior Lead Technical Editor. B.A., Writing, San Diego State University; 30 years editorial experience. Contribution: Lead Editor.

Tim Messick, Senior Graphic Designer. M.A., Biology, Humboldt State University; 13 years environmental science experience plus 20 years graphic design experience. Contribution: Graphic Designer.