






Draft Environmental Impact Report for the

2025 BLUEPRINT

State Clearinghouse No. 2025020168

Prepared for:

SACOG
Sacramento Area Council of Governments

June 2025

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May 2025

20240038.01

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LIST OF ABBREVIATIONS

2022 Scoping Plan	*Final 2022 Scoping Plan for Achieving Carbon Neutrality*
°C	degrees Celsius
°F	Fahrenheit
µg/m^3	micrograms per cubic meter
AB	Assembly Bill
ACC	Advanced Clean Cars
ACF	Advanced Clean Fleets
ACT	Advanced Clean Trucks
Action Plan	Sustainable Freight Action Plan
ADA	Americans with Disabilities Act
AHSC	Affordable Housing and Sustainable Communities Program
AIA	airport influence area
AICUZ	Air Installations Compatible Use Zones
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act of 1972
ALUC	airport land use commission
ALUCP	airport land use compatibility plans
ALUP	airport land use compatibility plan
AMI	area median income
APS	alternative planning strategy
AQAP	air quality attainment plan
AT&T	AT&T, Inc.
ATCM	Airborne Toxic Control Measure
Basin Plan	water quality control plan
BF	board feet
BLM	US Bureau of Land Management
BMP	best management practice
Board	Board of Forestry and Fire Protection
Btu	British thermal unit
CAA	federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy Standard
Cal EMA	California Emergency Management Agency

CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
CalARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model, Version 2022.1.1.29, computer program
CalEPA	California Environmental Protection Agency
CALFIRE	California Department of Forestry and Fire Protection
CALGreen	California Code of Regulations
California Energy Code	Title 24, Part 6, Building Energy Efficiency Standards
Cal-IPC	California Invasive Plant Council
CalRecycle	California's Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	climate action plan
CAPCOA Guide	*Health Risk Assessments for Proposed Land Use Projects Guidance Document*
CAPCOA Handbook	CAPCOA's *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*
CAPCOA	California Air Pollution Control Officers Association
Capital City Freeway	Business 80
CAPTI	Climate Action Plan for Transportation Infrastructure
CARB	California Air Resources Board
CARP	County Aquatic Resources Program
CARTA	Capital Area Regional Tolling Authority
CBC	California Building Code
CC&R	Covenants, Conditions and Restriction
CCA	federal Clean Air Act
CCAA	California Clean Air Act
CCR	California Code of Regulations
CCSCE	Center for the Continuing Study of the California Economy
CDE	California Department of Education
CDFA	California Department of Food and Agriculture
CDFW	California Department Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFC	California Fire Code
CFCP	California Farmland Conservancy Program
CFR	Code Federal Regulations
CGC	California Government Code

CGS	California Geologic Survey
CH_4	methane
CHHSL	California Human Health Screening Level
CHL	California Historical Landmark
CHP	California Highway Patrol
CIWMB	California Integrated Waste Management Board
CIWMP	countywide integrated waste management plan
CLUP	Comprehensive Land Use Plan
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSD	community services district
CSGC	California Strategic Growth Council
CTC	California Transportation Commission
CTPA	California Timberland Productivity Act
CUPA	certified unified program agency
CV	Central Valley
CVFPB	Central Valley Flood Protection Board
CVFPP	Central Valley Flood Protection Plan
CVP	Central Valley Project
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationships
dB	decibel
dBA	A-weighted decibels
DC	direct current
Delta	Sacramento-San Joaquin Delta
DHS	California Department of Health Services
DLRP	Division of Land Resource Protection
DMV	California Department of Motor Vehicles

DOC	California Department of Conservation
DoD	US Department of Defense
DOE	Archaeological Determinations of Eligibility
DOE	US Department of Energy
DOF	California Department of Finance
DOT Act	US Department of Transportation Act
DOT	US Department of Transportation
DPC	Delta Protection Commission
DPR	California Department of Parks and Recreation
DPS	distinct population segment
DRT	demand responsive transit
DSC	Delta Stewardship Council
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
ECA	Essential Connectivity Areas
EcoRestore	California EcoRestore
EDCAQMD	El Dorado Air Quality Management District
EDCTC	El Dorado County Transportation Commission
EIA	US Energy Information Administration
EIR	environmental impact report
Elk Grove CAP	*City of Elk Grove Climate Action Plan: 2019 Update*
EMFAC	ARB's On-Road Emissions Factor
EMMA	Emergency Managers Mutual Aid
EPA	US Environmental Protection Agency
EPAct	Energy Policy Act
EPCRA	Emergency Planning and Community Right-to-Know Act of 1986
ESA	environmental site assessment
ESA	federal Endangered Species Act
ESCP	erosion sediment control plan
ESP	economic sustainability plan
EU	Environmental Utilities
EV	electric vehicle
FAA	Federal Aviation Administration
FAST	Fixing America's Surface Transportation
FAST Act	Fixing America's Surface Transportation Act

FAV	fully autonomous vehicle
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FLP	Forest Legacy Program
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
FPR	Filter Performance Rating
FRA	Federal Railroad Administration
FRAP	Fire and Resource Assessment Program
FRAQMD	Feather River Air Quality Management District
FSP	fire safe plan
FSZ	Farmland Security Zone
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GHG	greenhouse gas
GMP	groundwater management plan
GSA	groundwater sustainability agency
GSAT	global-mean surface air temperature
GSP	gross state product
GSP	groundwater sustainability plan
GVWR	gross vehicle weight rating
GWh	gigawatt hours
GWP	global warming potential
HABS	Historic American Buildings Survey
HAER	Historic American Engineering Record
HALS	Historic American Landscapes Survey
HAP	hazardous air pollutant
HAZMAT	Hazardous Materials
HCD	California Department of Housing and Community Development
HCP	habitat conservation plan
HDPUV	heavy-duty pickup trucks and van
HEPA	high efficiency particulate air

HFC	hydrofluorocarbon
HFTA	High Frequency Transit Area
HHWE	Household Hazardous Waste Element
"Hot Spots" Act	Air Toxics "Hot Spots" Information and Assessment Act of 1987
HOV	high-occupancy vehicle
hp	horsepower
HPD	Historic Property Data File
HRA	health risk assessment
HTUA	High Threat Urban Area
HUD	US Department of Housing and Urban Development
HVAC	heating, ventilation, and air conditioning
Hz	hertz
I-5	Interstate 5
I-505	Interstate 505
I-80	Interstate 80
ICT	Innovative Clean Transit
IEPR	Integrated Energy Policy Report
IFC	International Fire Code
IIJA	Infrastructure Investment and Jobs Act
ILF	In-Lieu Fee
in/sec	inches per second
IPaC	Information for Planning and Consultation
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Plan
ITS	intelligent transportation systems
IWMA	Integrated Waste Management Act
kwh	kilowatt-hours
LAFCo	local agency formation commission
lb/day	pounds per day
L_{dn}	day-night level
L_{eq}	equivalent continuous sound level
LID	low impact development
L_{max}	maximum sound level
LRA	Local Responsible Area
LSI	large spark-ignition

LURMP	land use and resource management plan
LWCF Act	Land and Water Conservation Fund Act
MAP-21	Moving Ahead for Progress in the 21st Century Act
MBTA	Migratory Bird Treaty Act
MCAB	Mountain Counties Air Basin
MERV	minimum efficiency reporting value
MFP	Middle Fork American River Hydroelectric Project
mgd	million gallon per day
MLRA	major land resource area
MMBTU	millions of British thermal units
MMT	million metric tons
mPa	micro-Pascals
mpg	miles per gallon
mph	miles per hour
MPO	metropolitan planning organization
MPR	Micro-Particle Performance Rating
MRZ	Mineral Resource Zones
MS4	municipal separate storm sewer system
MSAT Protocol	Mobile Sources Air Toxics Protocol
MT	metric tons
MTIP	2025 Blueprint and 2025 Metropolitan Transportation Improvement Program
MTP	metropolitan transportation plan
MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
MW	megawatts
MY	model year
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	natural community conservation plan
NEHRP	National Earthquake Hazards Reduction Program
NESHAP	National Emission Standards for Hazardous Air Pollutant
NGPA	Natural Gas Policy Act
NHA	Sacramento-San Joaquin Delta National Heritage Area
NHL	National Historic Landmark
NHPA	National Historic Preservation Act

NHTS	National Household Travel Survey
NHTSA	National Highway Traffic Safety Administration
NID	Nevada Irrigation District
NO	nitric oxide
NO_2	nitrogen dioxide
NOA	naturally occurring asbestos
NOP	notice of preparation
NO_X	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OAP	Ozone Attainment Plan
OEHHA	Office of Environmental Health Hazard Assessment
OES	California Governor's Office of Emergency Services
OHP	Office of Historic Preservation
ORMP	oak resources management plan
OSHA	federal Occupational Safety and Health Administration
OSPR	Office of Spill Prevention and Response
OWTS	Onsite Wastewater Treatment Systems
ozone	photochemical smog
PCAPCD	Placer County Air Quality Management District
PCCP	Placer County Conservation Program
PCT	Pacific Crest National Scenic Trail
PCTPA	Placer County Transportation Planning Agency
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric Company
PHI	California Point of Historical Interest
PHRA	priority habitat restoration area
PM_{10}	respirable particulate matter
$PM_{2.5}$	fine particulate matter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act of 1970
ppb	parts per billion
ppm	parts per million

PPV	peak particle velocity
PRC	California Public Resources Code
PUC	Public Utilities Code
PURPA	Public Utility Regulatory Policies Act
RAA	Reserve Acquisition Area
Reclamation	US Bureau of Reclamation
RFS	Renewable Fuel Standard
RGP	regional general permit
RGP	regional general permit
RHNA	Regional Housing Needs Allocation
ROG	reactive organic gas
ROSB	Railroad Operations and Safety Branch
RPS	Renewables Portfolio Standard
RTP	regional transportation plan
RTPA	regional transportation planning agency
RWQCB	regional water quality control board
SACOG	Sacramento Area Council of Governments
Sacramento County CAP	*County of Sacramento Climate Action Plan for the Unincorporated Sacramento County and County Operations*
SacRT	Sacramento Regional Transit District
SacSewer	Sacramento Area Sewer District and Sacramento Regional County Sanitation District
SALCP	Sustainable Agricultural Lands Conservation Program
SARA Title III	Superfund Amendments and Reauthorization Act of 1986
SB	Senate Bill
SBE	State Board of Education
SCEA	sustainable communities environmental assessment
Scoping Plan	California Air Resources Board Scoping Plan
SCS	sustainable communities strategy
SDC	Seismic Design Criteria
SDWA	Safe Drinking Water Act
SEMS	Standard Emergency Management System
SF_6	sulfur hexafluoride
SFAP	Sustainable Freight Action Plan
SFNA	Sacramento Federal Nonattainment Area
SGMA	Sustainable Groundwater Management Act

SHPO	State Historic Preservation Officer
SIP	state implementation plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMARA	Surface Mining and Reclamation Act
SMUD	Sacramento Municipal Utility District
SO_2	sulfur dioxide
SPCC	Spill Prevention, Control, and Countermeasure
SPL	sound pressure level
SR	State Route
SRWTP	Sacramento Regional Wastewater Treatment Plant
SSBMI	Shingle Springs Band of Miwok Indians
SSHCP	South Sacramento Habitat Conservation Plan
STA	Sacramento Transportation Authority
SVAB	Sacramento Valley Air Basin
SVP	Society of Vertebrate Paleontology
SWAP	state wildlife action plan
SWP	State Water Project
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
Tanner Act	Toxic Air Contaminant Identification and Control Act
T-BACT	best available control technology for toxic air contaminant
TDM	transportation demand management
TDS	total dissolved solids
Technical Advisory	Technical Advisory: Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways
THP	timber harvest plan
TMA	Transportation Management Association
TMDL	total maximum daily load
TPA	transit priority area
TPP	transit priority project
tpy	tons per year
TPZ	Timberland Preserve Zones
TRU	transport refrigeration unit

UAIC	United Auburn Indian Community
UARP	Upper American River Project
UCMP	University of California Museum of Paleontology
UFP	ultrafine particulate matter
UPRR	Union Pacific Railroad
US 50	US Highway 50
USACE	US Army Corps of Engineers
USB	Urban Services Boundary
USC	US Code
USDA	US Department of Agriculture
USDOT	US Department of Transportation
USFS	US Forest Service
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
UST	underground storage tank
UWMP	urban water management plan
VdB	vibration decibel
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compound
Water Forum	Sacramento Area Water Forum
WDR	waste discharge requirement
WQO	Water Quality Objective
WUI	Wildland-Urban Interface
WWTP	wastewater treatment plant
YSAQMD	Yolo-Solano Air Quality Management District
ZEV	zero-emission vehicle

EXECUTIVE SUMMARY

The Sacramento Area Council of Governments (SACOG) is the lead agency for development and approval of the 2025 update of the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS, referred to as the 2025 Blueprint). This Draft EIR evaluates the environmental impacts related to the adoption and implementation of the 2025 Blueprint compared to baseline (2020) conditions.

The following summary is provided in accordance with Section 15123 of the California Environmental Quality Act (CEQA) and provides (1) a summary description of the project, (2) a synopsis of environmental impacts and recommended mitigation measures, (3) identification of the alternatives evaluated, and (4) a discussion of the areas of controversy and issues to be resolved.

ES.1 SUMMARY DESCRIPTION OF THE PROJECT

An MTP is a long-range (at least 20-year) comprehensive plan that is required for the region to qualify for some federal and state transportation funding for public transit, streets/roads, and bicycle and pedestrian improvements. Preparing the MTP is one of SACOG's primary statutory responsibilities under federal and state law. Under California's Sustainable Communities and Climate Protection Act, or Senate Bill (SB) 375 (Statutes of 2008, Chapter 728), SACOG is required to adopt an SCS as part of every MTP. The SCS must align transportation, housing, and land use decisions to help achieve the per-capita reduction targets for greenhouse gas (GHG) emissions from passenger vehicles that are set by the California Air Resources Board (CARB). The 2025 Blueprint aims to achieve various federal, state, regional, and local policy objectives related to sustainable development, transportation, and GHG emission reduction while considering financial, growth, and regulatory constraints. The plan is built on extensive data analysis, public outreach, and collaboration with local agencies and experts while being grounded in the board-adopted Triple Bottom Line framework, emphasizing a balanced approach to equity, economy, and environment.

The forecast growth (called the regional growth projections) for the 2025 Blueprint was adopted by the SACOG board in 2022, and anticipates that the region will grow by approximately 580,000 people, and will add just over 260,000 new jobs, and 278,000 new homes. The 2025 Blueprint is designed to achieve the regional SB 375 GHG target while prioritizing maintenance and rehabilitation of existing infrastructure. It integrates smart land use planning principles with a diverse and efficient transportation network. The plan identifies targeted transportation investments, including new capital improvements (e.g., highways, roads, bridges, and light rail), policies such as roadway pricing strategies (e.g., tolling and mileage fees), and multimodal benefits aimed at connecting housing to jobs, managing congestion, and addressing forecasted travel volumes.

For further information on the proposed project, see Chapter 2, "Project Description."

ES.2 ENVIRONMENTAL IMPACTS AND RECOMMENDED MITIGATION MEASURES

This Draft EIR has been prepared pursuant to the CEQA (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 1500, et seq.) to evaluate the physical environmental effects of the 2025 Blueprint.

Table ES-1, presented at the end of this chapter, provides a summary of the environmental impacts for the 2025 Blueprint. The table provides the level of significance of the impact before mitigation, recommended mitigation measures, the level of significance of the impact if all identified mitigation measures are implemented, and the impact significance anticipated due to SACOG's limited authority over future projects evaluated in this EIR.

Feasible mitigation measures are identified in this Draft EIR to avoid, minimize, rectify, reduce, or compensate for significant or potentially significant impacts, in accordance with State CEQA Guidelines Section 15126.4. Agencies with

jurisdiction to adopt these measures can and should do so (PRC Section 21081). However, SACOG does not have regulatory or approval authority over most future projects evaluated in this Draft EIR and SACOG cannot require local implementing agencies to adopt mitigation measures.

Due to SACOG's limited authority to impose mitigation at the project-level, this Draft EIR identifies a substantial number of significant and unavoidable impacts. These impacts may be: (1) less than significant after mitigation but identified as significant and unavoidable because SACOG cannot compel agencies to implement mitigation, (2) assumed significant and unavoidable because of uncertainty of the level of specific impacts associated with individual projects, or (3) significant and unavoidable after mitigation is implemented or because no feasible mitigation can be identified. The following lists impacts that are within the latter two categories identified above (i.e., the implementation of identified mitigation measures would not reduce the impact to a less-than-significant level). All impacts are identified in additional detail in Table ES-1.

- **Aesthetics**: Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and Its Surroundings in Non Urbanized Areas.
- **Agricultural and Forestry Resources**: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to Non-Agricultural Use; Conflict with Existing Zoning or General Plan Land Use Designations for Agricultural Use, or with a Williamson Act Contract; Conflict with Existing Zoning or Land Use Designation for, or Cause Rezoning of, Forest Land, Timberland, or Timberland Zoned Timberland Production; Result in the Loss of Forest Land or Conversion of Forest Land to Non-Forest Use; Involve Other Changes in the Existing Environment that could Result in Conversion of Farmland to Non-Agricultural.
- **Air Quality**: Be Inconsistent with Or Exceed Applicable Thresholds of Significance Established by The Local Air District For Long-Term Operational Criteria Air Pollutant Emissions and Short-Term Construction Criteria Air Pollutant Emissions; Expose Sensitive Receptors to Substantial TAC Concentrations, Including Those from Construction and Operational Emissions.
- **Cultural Resources**: Cause a Substantial Adverse Change in the Significance of a Historical Resource; Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources.
- **Greenhouse Gas Emissions and Energy**: Be inconsistent with the State's ability to achieve the 2030 reduction target of SB 32 and carbon neutrality by 2045, consistent with AB 1279; Increase GHG Emissions from Project Construction Activities Resulting from the 2025 Blueprint in a Manner Inconsistent with Achievement of the State's Climate Goals.
- **Noise:** Result in Temporary Noise Levels in the Vicinity of the Project that Exceed FTA Recommended Standards or Generate a Substantial Temporary Increase in Ambient Noise Levels.
- **Public Services:** Result in Substantial Adverse Physical Environmental Impacts Associated with the Provision of New or Physically Altered Governmental Facilities in order to Maintain Acceptable Service Ratios, Response Times or Other Performance Objectives for Fire Protection, Police Protection, Schools, Libraries, Social Services, and/or Other Public Services.
- **Recreation:** Increase the Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities such that Substantial Physical Deterioration of the Facility Could Occur or be Accelerated.
- **Transportation:** Result in a Change in per Capita VMT that is Inconsistent with CARB's 2022 Scoping Plan
- **Tribal Cultural Resources**: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource.
- **Utilities and Service Systems**: Have Insufficient Water Supplies Available to Serve the Project and Reasonably Foreseeable Future Development During Normal, Dry and Multiple Dry Years; Require or Result in the Relocation or Construction of New or Expanded Water, Wastewater, Treatment or Storm Water Drainage, Electric Power, Natural Gas, or Telecommunications Facilities, the Construction or Relocation of Which Could Cause Significant Environmental Effects.

- **Wildfire:** Exacerbate Wildfire Risks, Thereby Exposing People or Structures to a Significant Risk of Loss, Injury, or Death, or Exposing Project Occupants to Pollutant Concentrations or People or Structures to Significant Risk of Downslope or Downstream Flooding or Landslides as a Result of Post-fire Slope Instability.

ES.3 ALTERNATIVES TO THE PROPOSED PROJECT

This Draft EIR provides an evaluation of the following alternatives focused on strategies designed to substantially reduce or avoid environmental impacts while still feasibly meeting most basic project objectives:

- **Alternative 1: No Project Alternative** assumes that the 2025 Blueprint is not adopted and the projected Development Pattern and planned transportation improvements set forth in the 2020 MTP/SCS continue to apply.
- **Alternative 2: Infill Development Focused Alternative** focuses the majority of growth in infill areas and adjusts the transportation projects to serve these communities.
- **Alternative 3: Prioritized Investments in VMT Reduction Alternative** would include an enhanced focus on transportation projects that are associated with VMT reduction.

A more detailed description of each of these alternatives is provided in Chapter 5, "Alternatives," followed by a comparative analysis of how well the alternative would achieve the project objectives and the relative level of environmental impact associated with each alternative as compared to implementation of the 2025 Blueprint. Alternative 2 is the environmentally superior alternative.

ES.4 SUMMARY OF PUBLIC INVOLVEMENT

In accordance with the Public Participation Plan approved by the Board of Directors at the outset of the 2025 Blueprint planning process, SACOG has provided, and will continue to provide, opportunities for the public to participate in the development of the proposed 2025 Blueprint. SACOG hosted eight Focus Groups with 69 residents representing each of the six-counties in 2023, conducted a scientifically administered and demographically representative Built Environment Poll completed by approximately 3,000 residents, collected input through the 2025 Blueprint Survey, set up a table at each pop-up workshop at community events in nearly all of the counties and cities in the region, introduced the Public Outreach and Engagement Grant Program, hosted the 2025 Blueprint Regional Workshop in Folsom, and visited every city council and board of supervisors in the region to engage local officials on the regional initiatives and the 2025 Blueprint development.

ES.4.1 EIR Notice of Preparation and Public Scoping

CEQA requires an early and open process for determining the scope of issues that should be addressed in the EIR. The Notice of Preparation (NOP) provides formal notification to all federal, State, regional, and local agencies involved with funding or approval of the project, and to other interested organizations and members of the public, that an EIR will be prepared for the project. The NOP is intended to encourage interagency communication concerning the proposed plan and to provide background information about the proposed plan sufficient to allow agencies, organizations, and individuals to respond with specific comments and questions on the scope and content of the EIR.

SACOG initiated the scoping process on February 4, 2025, through the issuance of the NOP and distribution to responsible and trustee agencies, interested parties and organizations, and private organizations and individuals that could have interest in the project. Virtual scoping meetings were held on February 26 and February 27, 2025. At each meeting, a presentation by SACOG staff provided an overview of the proposed plan, the CEQA process, and key environmental issues identified in the NOP. A copy of the NOP and the written comments received during the 30-day NOP period are provided in Appendix A.

Throughout development of this EIR, SACOG has maintained a website dedicated to the project that provides related materials, status updates, and contact information. SACOG has also organized separate informational meetings with the community.

ES.4.2 Areas of Controversy

Many of the public scoping comments focused on functional aspects of the plan such as addressing growth, understanding the land use and housing assumed in the plan, promoting transit-oriented development and infill, limiting the cost of housing in areas supported by transit, addressing traffic, and developing bike and pedestrian-friendly communities. Other issues raised in scoping include the equity of programs and policies that are designed to limit VMT. Topics raised in scoping that are addressed in this Draft EIR include: the appropriate VMT threshold, developing a plan that achieves the regulatory standards and consistency with regional preservation plans, and the effects of a growing population on groundwater supplies.

ES.4.3 Issues to be Resolved

State CEQA Guidelines Section 15123(b)(3) requires that an EIR identify issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the 2025 Blueprint, the major issues to be resolved include decisions by SACOG, as lead agency, related to:

- Whether the identified mitigation measures should be approved or modified.
- Whether there are other mitigation measures that should be applied to the project besides those mitigation measures identified in this EIR.
- Whether there are any alternatives to the project that would substantially lessen any of the significant impacts of the project and achieve most of the basic project objectives.

In rendering a decision on the project, SACOG will consider input provided by the public, other agencies, community planning groups, and individuals.

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
Aesthetics				
Impact 3.1-1: Have a Substantial Adverse Effect on a Scenic Vista	PS	**Mitigation Measure 3.1-1: Protect Public Views of Important Scenic Vistas, Scenic Resources Along State Scenic Highways, and Visual Character and Quality** The implementing agency shall protect public views of important scenic vistas, scenic resources, and visual character and quality by taking the following (or equivalent) actions for projects that would significantly affect such resources: ▶ require that the design of new development provide appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods that have lower development intensities and building heights; ▶ ensure building heights stepped back from sensitive adjoining uses to maintain appropriate transitions in scale and to protect scenic vistas; ▶ avoid siting electric towers, solar power facilities, wind power facilities, communication transmission facilities and/or above ground lines along scenic roadways and routes, to the maximum extent feasible; ▶ reduce visual effects of projects and activities such that they do not obscure, detract from, or substantially negatively affect the quality of views from designated scenic roadways or scenic highways through project design changes; and ▶ comply with other local general plan policies and regulations related to the protection of public views of important scenic vistas, scenic resources along a state scenic highway, and visual character and quality. **Mitigation Measure 3.1-2: Design River Crossings to Minimize Aesthetic and Visual Impacts to the Greatest Feasible Extent** The implementing agency shall design river crossings to protect public views of important scenic vistas, scenic resources along a state scenic highway, and visual character and quality. Such design elements could include: ▶ scale, features, and dimensions that are architecturally pleasing and contextually appropriate for the adjacent neighborhoods; ▶ sizing that meets but does not exceed the capacity of the approach roadway; and ▶ design elements that obscure, detract from, or negatively affect the quality of views from public viewing areas shall be prohibited.	LTS	SU

NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable

Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
Impact 3.1-2: Substantially Damage Scenic Resources, Including, but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings Along a State Scenic Highway	PS	**Implement Mitigation Measure 3.1-1: Protect Public Views of Important Scenic Vistas, Scenic Resources Along State Scenic Highways, and Visual Character and Quality**	LTS	SU
Impact 3.1-3: Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and Its Surroundings in Non-Urbanized Areas	PS	**Mitigation Measure 3.1-3: Design Projects to be Visually Compatible with Surrounding Areas** The implementing agency shall require measures for projects that would significantly affect visual resources that minimize contrasts in scale and massing between the project and surrounding natural forms and developments. Strategies to achieve this may include: ▶ to the extent feasible, avoiding large cuts and fills when the visual environment would be substantially disrupted; ▶ siting or designing projects to minimize their intrusion into important viewsheds; ▶ using contour grading to match surrounding terrain; ▶ developing transportation systems to be compatible with the surrounding environments (e.g., colors and materials of construction material; scale of improvements); ▶ avoiding the use of non-native landscaping; if exotic vegetation is used, it should be used as screening and landscaping that blends in and complements the natural landscape; ▶ protecting or replacing aesthetically significant trees in the project area; ▶ using grading that blends with the adjacent landforms and topography; ▶ landscaping new slopes and embankments with compatible grasses, shrubs, and trees to soften cuts and edges; and ▶ designing new structures to be compatible in scale, mass, character, and architecture with existing structures.	SU	SU
Impact 3.1-4: Conflict with Applicable Zoning and Other Regulations Governing Scenic Quality in Urban Areas	LTS	No mitigation is required for this impact.	LTS	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
Impact 3.1-5: Create a New Source of Substantial Light or Glare Which Would Adversely Affect Day or Nighttime Views in the Area	PS	**Mitigation Measure 3.1-4: Reduce Sun Glare Resulting from Implementation of Planned Transportation Improvements** The implementing agency shall require measures that would minimize and control glare from planned transportation improvements that would result in significant glare impacts through the adoption of project design features that reduce glare. These features include: ▶ planting trees along transportation corridors to reduce glare from the sun; ▶ creating tree wells in existing sidewalks; ▶ adding trees in new curb extensions and traffic circles; ▶ adding trees to public parks and greenways; and ▶ landscaping off-street parking areas, loading areas, and service areas. Tree species planted to comply with this measure shall provide significant shade cover when mature. Utilities shall be installed underground along these routes wherever feasible to allow trees to grow and provide shade without need for severe pruning. **Mitigation Measure 3.1-5: Design Structures to Avoid or Reduce Impacts Resulting from Sun Glare** The implementing agency shall require measures that would minimize and control glare from implementation of the projected land use pattern and planned transportation improvements through the adoption of project design features that reduce glare for projects that would cause significant glare impacts. These features include: ▶ limiting the use of reflective materials, such as metal; ▶ using non-reflective material, such as paint, vegetative screening, matte finish coatings, and masonry; ▶ screening parking areas by using vegetation or trees; ▶ using low-reflective glass; and ▶ complying with applicable general plan policies or local controls related to glare. **Mitigation Measure 3.1-6: Design Structures to Avoid or Reduce Impacts Resulting from Nighttime Light and Glare** The implementing agency shall impose lighting standards on projects that would cause significant nighttime light and glare impacts that ensure that minimum safety and security needs are addressed and minimize light trespass and glare. These standards include the following:	LTS	SU

NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable

Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		▶ minimizing incidental spillover of light onto adjacent private properties and undeveloped open space, ▶ directing luminaries away from habitat and open space areas adjacent to the project sites, ▶ installing luminaries with a minimum Color Rendering Index rating of 90 which provides good color rendering and natural light qualities, and ▶ minimizing the potential for back scatter into the nighttime sky and for incidental spillover of light onto adjacent private properties and undeveloped open space.		
Agricultural and Forestry Resources				
Impact 3.2-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to Non-Agricultural Use	PS	**Mitigation Measure 3.2-1: Provide for Permanent Protection of Farmland** The implementing agency shall mitigate loss of such farmland by adopting measures that may include but are not limited to the following: ▶ Provide permanent protection of in-kind farmland at a minimum 1:1 ratio of comparable quality land, in the form of easements, fees, or elimination of development rights/potential. ▶ Locate the easement within the same city or community or city in which the conversion occurs; if easements within the same community or city are not available or otherwise feasible to obtain, the easement shall be in as close proximity as possible to the same city or community in which the conversion occurs.	SU	SU
Impact 3.2-2: Conflict with Existing Zoning or General Plan Land Use Designations for Agricultural Use, or with a Williamson Act Contract	PS	No feasible mitigation measures exist to reduce the impact.	SU	SU
Impact 3.2-3: Conflict with Existing Zoning or Land Use Designation for, or Cause Rezoning of, Forest Land, Timberland, or Timberland Zoned Timberland Production	PS	No feasible mitigation measures exist to reduce the impact.	SU	SU
Impact 3.2-4: Result in the Loss of Forest Land or Conversion of Forest Land to Non Forest Use	PS	**Mitigation Measure 3.2-2: Provide for Permanent Protection of Forest Land and Timberland** The implementing agency shall mitigate for loss of forest land or timberland by providing permanent protection of in-kind forest land or timberland at a minimum 1:1 ratio of comparable quality land, in the form of easements, fees, or elimination of development rights/potential. If feasible, the easement should be located within or in close proximity to the land that is converted.	SU	SU

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
Impact 3.2-5: Involve Other Changes in the Existing Environment that could Result in Conversion of Farmland to Non-Agricultural	PS	**Mitigation Measure 3.2-3: Minimize Indirect Conversion of Farmland to Non-Agricultural Use** Implementing agencies shall require project proponents to: ▶ Design proposed projects to minimize, to the greatest extent feasible, the loss of the highest valued farmland. ▶ Redesign project features to minimize fragmenting or isolating farmland. Where a project involves acquiring land or easements, ensure that the remaining farmland is of a size sufficient to allow economically viable farming operations. This would avoid the fragmentation or isolation of farmland in a way that would not allow for economically viable farming operations which could increase the risk of it being indirectly converted to non-agricultural uses. The project proponents shall be responsible for acquiring easements, making lot line adjustments, and merging affected land parcels into units suitable for continued commercial agricultural management. ▶ Reconnect utilities or infrastructure that serve agricultural uses if these are disturbed by project construction. If a project temporarily or permanently cuts off roadway access or removes utility lines, irrigation features, or other infrastructure, the project proponents shall be responsible for restoring access as necessary to ensure that economically viable farming operations are not interrupted. ▶ Manage project operations to minimize the introduction of invasive species or weeds that may affect agricultural production on adjacent agricultural land. Where a project has the potential to introduce sensitive species or habitats or have other spill-over effects on nearby agricultural lands, the project proponents shall be responsible for acquiring easements on nearby agricultural land and/or financially compensating for indirect effects on nearby agricultural land. Easements (e.g., flowage easements) shall be required for temporary or intermittent interruption in farming activities (e.g., because of seasonal flooding or groundwater seepage). Acquisition or compensation would be required for permanent or significant loss of economically viable operations. ▶ Align corridors, incorporate buffer zones and setbacks, and integrate berms and fencing to avoid agricultural lands and to reduce conflicts with agricultural lands. ▶ Minimize severance and fragmentation of agricultural land by constructing underpasses and overpasses at reasonable intervals to provide property access.	SU	SU

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		▶ Provide buffers, berms, setbacks, fencing, or other project design measures to protect surrounding agriculture, and to reduce conflict with farming that could result from implementation of transportation improvements and/or projected land use pattern included as a part of the 2025 Blueprint. ▶ Implement other feasible conservation tools, such as those recommended by the California Department of Conservation Division of Land Resource Protection. ▶ Require project applicants to agree to provide real estate disclosures explaining farmers' rights to purchasers or lessees as a condition of project approval for projects located in active farming areas. ▶ Incorporate the use of agricultural buffers, as appropriate, to reduce land use conflicts with farming operations. **Mitigation Measure 3.2-4: Manage Growth at the Rural-Urban Interface to Support the Long-Term Viability of Agriculture** The implementing agency shall avoid or minimize pressure to convert agriculture land at the urban edge to non-agricultural uses by adopting regulations that enforce the innovations and best practices identified to minimize conversion pressures on farmland. Examples include but are not limited to: ▶ **Agriculture Buffers:** Buffers, generally imposed on new development, can assist in reducing urban land use conflicts with farming operations. Invest in urban edge agricultural operations that reinforce the effectiveness and permanence of buffers, create education and training opportunities, and generate a revenue stream that supports buffer acquisition and maintenance. ▶ **Right-to-Farm Ordinances:** These ordinances require project applicants to agree to provide real estate disclosures explaining farmers' rights to purchasers or lessees as a condition of project approval for projects located in active farming areas. The intent of such an ordinance is to protect farmers from nuisance complaints and enforcement actions. ▶ **Infill and Redevelopment Policies:** These policies, which are supportive of infill and redevelopment and consistent with the policy objectives of the 2025 Blueprint and SB 375, would direct population growth to urban communities, or in established rural communities, thereby reducing pressure to convert agricultural land to development.		

Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
Air Quality				
Impact 3.3-1: Conflict With or Obstruct Implementation of an Applicable Air Quality Plan	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.3-2: Be Inconsistent with Or Exceed Applicable Thresholds of Significance Established by The Local Air District for Long-Term Operational Criteria Air Pollutant Emissions and Short-Term Construction Criteria Air Pollutant Emissions	S	**Implement Mitigation Measure 3.16-1: Implement VMT Reduction Strategies** **Mitigation Measure 3.3-1: Require Applicable Design Measures** Implementing agencies shall require projects that exceed the long-term operational thresholds to mitigate the air quality impacts to below such thresholds using applicable and feasible mitigation, as defined by the local air district. Examples of design measures that would reduce criteria pollutant emissions include, but are not limited to: ▶ use of energy-efficient lighting and process systems (e.g., low-NO_X water heaters and boiler units); ▶ design streets to maximize pedestrian access to transit stops; ▶ include bus shelters at transit access points where deemed appropriate by local public transit operator in large residential, commercial, and industrial projects; ▶ equip residential structures with electric outlets in the front and rear of the structure to facilitate use of electrical lawn and garden equipment; ▶ provide for, or contribute to, dedication of land for off-site Class I and Class II bicycle facilities linking the project to designated bicycle commuting routes in accordance with the regional bikeway master plan; ▶ contribute to the provision of synchronized traffic signals on roadways affected by the project and as deemed necessary by the local public works department; ▶ provide transit-enhancing infrastructure that includes bus turnouts or bulbs, passenger benches, street lighting, route signs and displays, and shelters as demand and service routes warrant, subject to review and approval by local transportation planning agencies; ▶ provide pedestrian-enhancing infrastructure that includes sidewalks and pedestrian paths, direct pedestrian connections, street trees to shade sidewalks, pedestrian safety designs and infrastructure, street furniture and artwork, street lighting, pedestrian signalization and signage, and/or access between bus service and major transportation points within the project;	SU	SU

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		▶ include neighborhood park(s) or other recreational options, such as trails, within the development to minimize vehicle travel to off-site recreational and/or commercial uses; ▶ install solar water heaters; ▶ incorporate mixed uses, where permitted by local development regulations, to achieve a balance of commercial, employment, and housing options on the project site; ▶ contribute to traffic-flow improvements (e.g., right-of-way, capital improvements) that reduce traffic congestion and do not substantially increase roadway capacity; ▶ provide preferential parking spaces for carpool and vanpool vehicles, implement parking fees for single-occupancy vehicle commuters, and implement parking cash-out program for employees; ▶ use clean fuel vehicles in the vehicle fleet; ▶ require all employment centers to include an adequate number of on-site shower/locker facilities for bicycling and pedestrian commuters (typically one shower and three lockers for every 25 employees per shift); ▶ construct/contribute to bicycle and pedestrian facility improvements; ▶ provide ancillary services (e.g., cafeterias, health clubs, automatic tellers, and post offices) within walking distance of proposed development (no further than 1,500 feet) as appropriate and in compliance with local development regulations; ▶ provide park-and-ride lots as deemed feasible and appropriate by transportation planning agencies; ▶ employment centers that exceed a designated size, as measured by the number of employees, shall provide on-site child care and after-school facilities or contribute to off-site construction of such facilities within walking distance of employment land uses (for employment centers on or adjacent to industrial land uses, on-site child daycare centers shall be provided only if supported by the findings of a comprehensive health risk assessment (HRA) performed in consultation with the local air district); ▶ provide on-site pedestrian facility enhancements, such as walkways, benches, proper lighting, vending machines, and building access that are physically separated from parking lot traffic;		

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		▶ offer alternative work schedules, where practical, that allow for work hours that are compressed into fewer than 5 days (e.g., 9/80, 4/40, or 3/36 schedules), or allow flextime schedules; ▶ provide transit amenities (e.g., on-site and off-site bus turnouts, passenger benches, or shelters) where deemed appropriate by local transportation planning agencies; ▶ contribute to the provision of synchronized traffic signals on roadways affected by the proposed project and as deemed necessary by the local public works department; ▶ provide video conferencing facilities; ▶ commit to support programs that include guaranteed ride home, subsidized transit passes, and rideshare matching; ▶ provide transportation (e.g., shuttles) to major transit stations and multimodal centers; ▶ require each employer employment center (more than 25 employees) to assign a transportation coordinator for the applicable Transportation Management Association (TMA); ▶ require all employers to install a permanent display in employee common areas of alternate transit information, as determined by the requirements of the TMA; ▶ require employers or employment centers (more than 25 employees) to implement a guaranteed ride home program; ▶ require employers or employment centers (more than 25 employees) to implement an incentive program for riding transit, carpooling, vanpooling, biking, and walking instead of driving a single-occupancy vehicle to work, and design and locate buildings to facilitate transit access; ▶ install Energy Star (or equivalent) cool roofing systems on all buildings; ▶ design shuttle and transit exits to adjoining streets to reduce time to reenter traffic from the project site; ▶ increase wall and attic insulation to 20 percent above Title 24 requirements (residential and commercial); ▶ orient buildings to take advantage of solar heating and natural cooling, and use passive solar designs (residential, commercial, and industrial);		

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		▶ provide energy-efficient windows (double pane and/or Low-E) and awnings or other shading mechanisms for windows, porches, patios, and walkways; ▶ include passive solar cooling and heating features in designs, as well as ceiling and whole house fans; ▶ include programmable thermostats in the design of heating and cooling systems; and ▶ use day lighting systems, such as skylights, light shelves, and interior transom windows. See also Chapter 3, "Measures to Reduce GHG Emissions," in CAPCOA's *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* (CAPCOA Handbook) for additional reduction measures (CAPCOA 2024). Although the CAPCOA Handbook focuses on GHG reduction measures, co-benefits of many measures include criteria pollutant emission reductions. Future project proponents shall use the CAPCOA Handbook to develop measures to reduce emissions to below thresholds if significant impacts are identified. **Mitigation Measure 3.3-2: Require Applicable Construction Measures** Lead agencies shall require project applicants, prior to and during construction, to implement construction mitigation measures that, at a minimum, meet the requirements of the applicable air district with jurisdiction over the area in which construction activity would occur if the project is anticipated to exceed thresholds of significance for short-term criteria air pollutant emissions. Projects that exceed these thresholds shall mitigate the air quality impacts using all applicable and feasible mitigation. For construction activity on the project site that is anticipated to exceed thresholds of significance, the project applicant(s) shall require construction contractors to implement both Standard Mitigation Measures and Best Available Mitigation Measures for Construction Activity to reduce emissions for all construction activity performed in the plan area. Examples of mitigation measures could include, but not limited to, the following: ▶ The project proponent or their primary contractor shall implement a Fugitive Dust Control Plan. ▶ All grading operations on a project shall be suspended when winds exceed 20 mph or when winds carry dust beyond the property line despite implementation of all feasible dust control measures.		

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		▶ Construction sites shall be watered as directed by the local air district and as necessary to prevent fugitive dust violations. ▶ An operational water truck shall be on-site at all times. Water shall be applied to control dust as needed to prevent visible emissions violations and off-site dust impacts. ▶ On-site dirt piles or other stockpiled particulate matter shall be covered, wind breaks installed, and water and/or soil stabilizers employed to reduce wind-blown dust emissions. The use of approved nontoxic soil stabilizers shall be incorporated according to manufacturers' specifications to all inactive construction areas. ▶ All transfer processes involving a free fall of soil or other particulate matter shall be operated in such a manner as to minimize the free fall distance and fugitive dust emissions. ▶ Approved chemical soil stabilizers shall be applied according to the manufacturers' specifications to all inactive construction areas (previously graded areas that remain inactive for 96 hours), including unpaved roads and employee/equipment parking areas. ▶ To prevent track-out, wheel washers shall be installed where project vehicles and/or equipment exit onto paved streets from unpaved roads. Vehicles and/or equipment shall be washed before each trip. Alternatively, a gravel bed may be installed as appropriate at vehicle/equipment site exit points to effectively remove soil buildup on tires and tracks and prevent/diminish track-out. ▶ Paved streets shall be swept frequently (water sweeper with reclaimed water recommended; wet broom permitted) if soil material has been carried onto adjacent paved, public thoroughfares from the project site. ▶ Temporary traffic control shall be provided as needed during all phases of construction to improve traffic flow, as deemed appropriate by the applicable department of public works and/or California Department of Transportation (Caltrans), and to reduce vehicle dust emissions. An effective measure is to enforce vehicle traffic speeds at or below 15 mph. ▶ Traffic speeds on all unpaved surfaces shall be reduced to 15 mph or less, and unnecessary vehicle traffic shall be reduced by restricting access. Appropriate training for truck and equipment drivers, on-site enforcement, and signage shall be provided.		

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		▶ Ground cover shall be reestablished on the construction site as soon as possible and before final occupancy through seeding and watering. ▶ Open burning shall be prohibited at the project site. No open burning of vegetative waste (natural plant growth wastes) or other legal or illegal burn materials (e.g., trash, demolition debris) may be conducted at the project site. Vegetative waste shall be chipped or delivered to waste-to-energy facilities (permitted biomass facilities), mulched, composted, or used for firewood. It is unlawful to haul waste materials off-site for disposal by open burning. ▶ The primary contractor shall be responsible for ensuring that all construction equipment is properly tuned and maintained before and for the duration of on-site operation. ▶ Existing power sources (e.g., power poles) or clean-fuel generators shall be used rather than temporary power generators. ▶ A traffic plan shall be developed to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. Operations that affect traffic shall be scheduled for off-peak hours. Obstruction of through-traffic lanes shall be minimized. A flag person shall be provided to guide traffic properly and ensure safety at construction sites. ▶ The project proponent or their primary contractor shall assemble a comprehensive initial inventory (i.e., make, model, engine year, horsepower, emission rates) of all heavy-duty off-road (portable and mobile) equipment (50 horsepower and greater) that would be used an aggregate of 40 or more hours for the construction project and provide a plan for approval by the local air district demonstrating that the heavy-duty (equal to or greater than 50 horsepower) off-road equipment to be used for construction, including owned, leased, and subcontractor vehicles, shall achieve a project-wide fleet-average 10 percent NO_X reduction compared to the most recent CARB fleet average at the time of construction. These equipment emission reductions can be demonstrated using the most recent version of the Construction Mitigation Calculator developed by the SMAQMD. Acceptable options for reducing emissions may include use of late-model engines, low-emission diesel products, alternative fuels, engine retrofit technology (Carl Moyer Guidelines), after-treatment products, voluntary off-site mitigation projects, the provision of funds for air district off-site mitigation projects, and/or other options as they become available. In addition, implementation of these measures would also result in a 5 percent reduction in ROG emissions from heavy-duty diesel equipment. The local air district shall be contacted to discuss alternative measures.		

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
Impact 3.3-3: Expose Sensitive Receptors to Substantial TAC Concentrations, Including Those from Construction and Operational Emissions	S	**Implement Mitigation Measure 3.3-2: Require Applicable Construction Measures** **Mitigation Measure 3.3-3: Conduct a Site-Specific Health Risk Assessment** Where sensitive land uses or TAC sources meeting CARB's criteria in size and activity (i.e., heavy-duty trucks routes, stationary sources requiring air district permits) would be sited within the minimum CARB-recommended distances, a screening-level HRA, and, if warranted, a site-specific HRA, shall be conducted to determine all feasible mitigation and best practices. Identified feasible mitigations and best practices shall be implemented to reduce receptor cancer risks below 10 in one million or an acute hazard index of less than one. The HRA protocols of the applicable local air districts shall be followed or, where a district/office does not have adopted protocols, the protocol of SMAQMD or CAPCOA shall be followed. Note that the MSAT Protocol only applies to Sacramento County; however, many of the recommendations still apply in other areas. In addition, the MSAT Protocol addresses DPM and other MSATs. Best practices shall be applied as recommended and applicable, to reduce the impact to a less-than-significant level where feasible. The HRA should give particular attention to the nature of the receptor, recognizing that some receptors are particularly sensitive (e.g., schools, day care centers, assisted living and senior centers, and hospitals) and may require special measures. Examples of best practices that studies have suggested to be effective include: ▶ install, operate, and maintain in good working order a central heating, ventilation, and air conditioning (HVAC) system or other air intake system in the building, or in each individual unit, that meets or exceeds a minimum efficiency reporting value (MERV) of 13, a Micro-Particle Performance Rating (MPR) of at least 1500, or Filter Performance Rating (FPR) of at least 10 (which is equivalent to an MPR of 1500), and includes either high efficiency particulate air (HEPA) filters or American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE) certified 85 percent or higher; ▶ install passive (drop-in) electrostatic filtering systems, especially those with low air velocities (i.e., 1 mile per hour [mph]), as a part of the HVAC project HVAC system(s); ▶ maintain, repair, and/or replace the HVAC system on an ongoing and as needed basis or prepare an operation and maintenance manual for the HVAC system and the filter, for inclusion in the Covenants, Conditions and Restrictions (CC&Rs) for residential projects and a separate homeowners manual;	SU	SU

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		▶ orient air intakes away from TAC sources or provide shields or buffers to the maximum extent possible; maintain a vegetative barrier between new residential units consisting of tree species with year-round foliage and a porosity of 20 or 40 percent wherever feasible; and ▶ use tiered tree planting between roadways and sensitive receptors wherever feasible, using native, needled (coniferous) species, ensure a permanent irrigation source, and provide permanent funding to maintain and care for the trees. Additionally, implementing agencies should contact the applicable air district and/or CAPCOA for the most current list of applicable best practices for limiting exposure of sensitive receptors to substantial TAC concentrations consistent with the CARB Handbook and MSAT Protocol Guidance Document. **Mitigation Measure 3.3-4: Implement the Strategies Contained in the CARB Technical Advisory** The implementing agency shall implement the strategies identified in the CARB Technical Advisory to reduce air pollution exposure near high-volume roadways to less-than-significant levels, where feasible. Examples of effective strategies include (CARB 2017): ▶ use of speed reduction mechanisms such as roundabouts to reduce the frequency of stop-and-go driving common among streets that support stop signs; ▶ use of traffic signal management to limit the frequency of stop-and-go driving and vehicle idling; ▶ enforcement and establishment of speed limit reductions of high-speed roadways; ▶ use of design elements that promote air flow and pollutant dispersion along street corridors to optimize air flow, building downwash, and pollution dispersal; ▶ incorporate bike lanes and sidewalks to promote alternative, zero-pollution modes of transportation; and ▶ construct solid barriers directly adjacent to high-volume roadways such as sound walls to improve downwash. **Mitigation Measure 3.3-5: Require Construction Health Risk Assessment** A site-specific HRA shall be required for all construction projects anticipated to last more than six months and located within 1,000 feet of sensitive receptors (as defined in California Health and Safety Code Section 42705.5[a][5]) regardless of intensity of		

Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		construction. All recommendations from the HRA shall be enforced as conditions of approval of the development and the implementing agency shall require implementation of all feasible measures to reduce impacts to a less than significant level.		
Impact 3.3-4: Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People	S	**Mitigation Measure 3.3-6: Require Applicable Local Air District Measures and Best Practices Related to Odors** Implementing agencies shall require assessment of new and existing odor sources for individual non-agricultural land use projects to determine whether sensitive receptors would be exposed to objectionable odors and apply recommended applicable mitigation measures as defined by the applicable local air district and best practices. Examples of mitigation measures that may be applied where feasible and necessary to address site-specific impacts, include but are not limited to: ▶ Proposed industrial, commercial, or convenience land uses (e.g., fast-food restaurants, painting operations) that have the potential to emit objectionable odors shall be located as far away as feasibly possible from existing and proposed sensitive receptors and oriented where possible to place buildings or other obstructions between the odor source and downwind receptors. ▶ The odor-producing potential of land uses shall be considered when the type of facility that would occupy industrial, commercial, or convenience areas is considered. ▶ If an odor-emitting facility is to occupy space in the industrial, commercial, or convenience area, the odor-producing potential of the source and potential control devices shall be determined in coordination with the local air district and shall be based on the number of complaints associated with existing sources of the same nature. Odor-control devices (e.g., wet chemical scrubbers, HVAC filters, activated carbon scrubbers, biologically active filters, enclosures) shall be identified in the improvement plans before the approval of building permits. The odor-control devices shall be installed before the issuance of certificates of occupancy for the potentially odor-producing use. ▶ Require notification to incoming property owners (e.g., real estate disclosures) regarding the existence of pre-existing odor-emitting facilities or operations (e.g., similar to avigation easements for noise).	LTS	SU

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		Also, see specifically SMAQMD's Guide to Air Quality Assessment in Sacramento County, which.an extensive list of technology- and design-based odor reduction measures in its Technology- and Design-Based Odor Reduction Measures appendix.		
Biological Resources				
Impact 3.4-1: Have a Substantial Adverse Effect, Either Directly or Through Habitat Modification, on Any Species Identified as a Candidate, Sensitive, or Special-Status in Local or Regional Plans, Policies, or Regulations by CDFW OR USFWS	PS	**Mitigation Measure 3.4-1: Conduct a Biological Resources Assessment** Prior to initiation of construction or other ground disturbing activities the implementing agency will conduct, or require an applicant to conduct, a preliminary biological analysis for the project site that will include review of Section 3.4.2, "Environmental Setting," Appendix C-2, Appendix C-3, and any relevant HCP/NCCP as well as current queries of CNDDB, CNPS Inventory, and USFWS IPaC, and a reconnaissance-level survey of the project site. If it is determined during the preliminary biological analysis that the project may have adverse impacts on habitats that could support special-status species or other sensitive biological resources (e.g., wetlands, nursery sites, sensitive natural communities) and these habitats cannot be avoided, the implementing agency will require a qualified biologist to conduct project specific land cover and habitat mapping (including delineation of aquatic resources if any are present), and a habitat assessment of the area of impact to identify whether any special-status plant or wildlife species habitat, sensitive natural communities, riparian habitat, or other sensitive habitats, wetlands, wildlife movement corridors, or wildlife nursery sites could be affected by construction activities. If it is determined during the preliminary biological analysis that sensitive natural communities have potential to occur in the project impact area, the implementing agency will identify and map on-site vegetation to the alliance level following standards described in the most current edition of *A Manual of California Vegetation* (including updated natural communities data at http://vegetation.cnps.org/). Additionally, the biologist will determine whether any local policies or ordinances intended to protect biological resources (e.g., tree removal policies) would apply, and whether construction activities would result in conflicts with these policies or ordinances. The data reviewed will include the Biological Resources setting of this Draft EIR (see Section 3.4.2, "Environmental Setting"), and the best available current data for the area, including vegetation mapping data, species distribution information, CNDDB, CNPS Inventory of Rare and Endangered Plants of California, and relevant general plans, HCPs, and NCCPs. The biological resources assessment will be completed at a time of year that is	LTS	SU

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		appropriate for identifying habitat and no more than 1 year prior to initiation of construction activities. A qualified biologist will: ▶ hold a wildlife biology, botany, ecology, forestry, or other relevant degree from an accredited university, ▶ be knowledgeable in relevant species life histories and ecology, ▶ be able to correctly identify relevant species and habitats, ▶ be knowledgeable about survey protocols, ▶ be knowledgeable about state and federal laws regarding the protection of special-status species, and ▶ have experience with CDFW's CNDDB and Biogeographic Information and Observation System (BIOS). If the qualified biologist determines that the land within and in the vicinity of the area of impact does not contain habitat potentially suitable for special-status plant or wildlife species, sensitive natural communities, riparian habitat, or other sensitive habitats, wetlands, wildlife movement corridors, or native wildlife nursery sites, construction activities would not result in adverse effects on these resources and project implementation would not result in conflict with a local policy or ordinance or an adopted HCP or NCCP. The biologist will document these findings in a letter report to the implementing agency, and no further mitigation is required. **Mitigation Measure 3.4-2: Identify Special-Status Plant Species, and Avoid, Minimize, and Mitigate Impacts** If the qualified biologist, after implementation of Mitigation Measure 3.4-1, determines that habitat potentially suitable for special-status plants is present within the area of impact and could be adversely affected by construction activities, then the following measures will be implemented: ▶ Eleven special-status plant species (one of which constitutes two subspecies) are covered under adopted HCPs or NCCPs within the plan area (Natomas Basin HCP, South Sacramento HCP, Western Placer County HCP/NCCP, and Yolo HCP/NCCP; Appendix C-2). If a project is within the plan area of an adopted HCP or NCCP, and the project qualifies as a covered activity under the HCP or NCCP, then the implementing agency may seek coverage under the plan. If permitting through an adopted HCP or NCCP is pursued, the implementing agency will be required to meet the permit conditions and other requirements established in the plan's Implementing Agreement, which often includes (depending on the plan) submitting		

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		a complete application package, paying required fees, fulfilling any appropriate survey requirements, and complying with all applicable conservation measures. ▶ For projects that are not within the plan area of an adopted HCP or NCCP or if special-status plant species that are not covered under an adopted HCP or NCCP may be present within the area of impact, the following measures will apply: ▪ Prior to project initiation and during the blooming period for special-status plant species with potential to occur in the area of impact, a qualified botanist will conduct protocol-level surveys for special-status plants in accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018 or current version). A qualified botanist will: • be knowledgeable about plant taxonomy, • be familiar with plants of the region, including special-status plants and sensitive natural communities, • have experience conducting floristic botanical field surveys as described in the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities, • be familiar with *The Manual of California Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/), and • be familiar with federal, state, and local statutes and regulations related to plants and plant collecting. ▪ If no special-status plants are found during the protocol-level survey, the botanist will document the findings in a letter report to USFWS or CDFW, as appropriate depending on species status, and the implementing agency and no further mitigation will be required. ▪ If special-status plant species are found that cannot be avoided during construction, the implementing agency will consult with CDFW or USFWS to determine the appropriate mitigation measures for direct and indirect impacts that could occur as a result of project construction. The implementing agency will implement the agreed-upon mitigation measures to compensate for the loss of occupied habitat or individuals. Mitigation measures may include preserving and enhancing existing populations, creation of off-site populations on project mitigation sites through seed collection or		

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		transplantation, and/or restoring occupied habitat in sufficient quantities to offset the loss of occupied habitat and/or individuals. **Mitigation Measure 3.4-3: Identify Special-Status Wildlife and Avoid, Minimize, and Mitigate Impacts** If the qualified biologist, after implementation of Mitigation Measure 3.4-1, determines that habitat potentially suitable for special-status wildlife is present within the area of impact and could be adversely affected by construction activities, then the following measures will be implemented: ▶ Thirty- two special-status wildlife species are covered under adopted HCPs or NCCPs within the plan area (Natomas Basin HCP, South Sacramento HCP, Western Placer County HCP/NCCP, and Yolo HCP/NCCP; Appendix C-2). If a project is within the plan area of an adopted HCP or NCCP, and the project qualifies as a covered activity under the HCP or NCCP, then the implementing agency may seek coverage under the plan. If permitting through an adopted HCP or NCCP is pursued, the implementing agency will be required to meet the permit conditions and other requirements established in the plan's Implementing Agreement, which often includes (depending on the plan) submitting a complete application package, paying required fees, fulfilling any appropriate survey requirements, and complying with all applicable conservation measures. ▶ For projects that are not within the plan area of an adopted HCP or NCCP or if special-status wildlife species that are not covered under an adopted HCP or NCCP may be present within the area of impact due to the presence of habitat potentially suitable for the species, protocol-level surveys (where applicable), preconstruction surveys, and avoidance and minimization measures will be required. Surveys will be conducted by a qualified biologist with the proper handling permits, as applicable. Acceptable species-specific survey procedures will be developed in consultation with CDFW or USFWS, as appropriate depending on species status. Alternatively, if habitat potentially suitable for the special-status species is determined to be present within the area of impact, presence of special-status species may be assumed instead of confirmed with surveys. Consultation with CDFW, USFWS, and/or NOAA Fisheries may also be required, depending on the type of impact and the species involved. Refer to the Avoidance and Minimization Measures below for each special-status wildlife species with potential to occur in the plan area and apply to the project as applicable and feasible.		

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		Avoidance and Minimization Measures **California Red-Legged Frog** ▶ If habitat potentially suitable for California red-legged frog is determined to be present within or in the vicinity of the area of impact, the implementing agency will retain a USFWS-approved biologist to conduct a pre-construction survey for California red-legged frog within the area of impact no more than 2 weeks before commencement of project construction activities. ▶ If no California red-legged frogs are found, further mitigation will not be required. ▶ If California red-legged frog adults, tadpoles, or eggs are found, the biologist will contact USFWS and CDFW to determine whether relocating the species is appropriate. If the agencies approve of relocation, a USFWS-approved biologist will be allowed sufficient time to move the species from the work site before work activities begin. ▶ The biologist will conduct environmental awareness training for all construction personnel on required avoidance procedures and protocols if a California red-legged frog enters an active construction zone. ▶ To the extent practicable, construction will not occur during the wet season, when California red-legged frogs are more likely to disperse through upland habitats. Work within all waters, wetlands, and the riparian corridor will be limited to the period from April 15 to October 15, except for vegetation clearing. ▶ For work conducted during the California red-legged frog migration season (November 1 through May 31), the following will apply: ▪ Flagging will be placed around the area of impact during ground-disturbing activities after hand excavation of burrows has been completed. Flagging will also be placed around all spoils and stockpiles. No project activities will occur in the flagged area. A qualified biologist will visit the site weekly to ensure that the flagging is in good working condition. Flagging design will be subject to the approval of USFWS. If flagging is not used, a qualified biological monitor will be on-site during all ground disturbance activities. ▪ A qualified biologist will survey the area of impact (including access roads) in mornings following measurable precipitation events. Construction may commence once the biologist has confirmed that no California red-legged frogs are in the work area.		

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		▶ Each day that work is conducted, the following will apply: ▪ Prior to beginning work each day, underneath equipment and stored pipes greater than 1.2 inches in diameter will be inspected for California red-legged frogs. If any are found, they will be allowed to move out of the construction area. ▪ Trenches and holes within the area of impact will be covered and inspected daily for stranded individuals. Trenches and holes deeper than 1 foot will contain escape ramps (maximum slope of 2:1) to allow trapped individuals to escape uncovered holes or trenches. Holes and trenches will be inspected prior to filling. ▪ All food and food-related trash will be enclosed in sealed trash containers at the end of each workday and removed completely from the area of impact once every three days to avoid attracting wildlife. ▪ A speed limit of 15 mph will be maintained on dirt roads. ▪ All equipment will be maintained such that there are no leaks of automotive fluids such as fuels, oils, and solvents. Any fuel or oil leaks will be cleaned up immediately and disposed of properly. ▪ Plastic monofilament netting (erosion control matting) or similar material will not be used within the area of impact because California red-legged frogs may become entangled or trapped. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds. ▪ Hazardous materials (e.g., such as fuels, oils, solvents) will be stored in sealable containers in a designated location that is at least 100 feet from aquatic habitat. If it is not feasible to store hazardous materials 100 feet from wetlands and river and stream channels, then spill containment measures will be implemented to prevent the possibility of accidental discharges to wetlands and waters. ▶ Prior to commencement of ground-disturbing activities (including vegetation disturbance activities) that would result in permanent loss of habitat for California red-legged frog, the implementing agency will implement the following measures to compensate for loss of California red-legged frog habitat:		

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		▪ The implementing agency will provide suitable in-kind habitat that will be created, restored, and/or set aside in perpetuity at a ratio of 3:1. Alternatively, credits will be purchased at a USFWS-approved conservation bank. Compensation plans will be subject to review and approval by USFWS. ▪ In-kind habitat compensation will occur prior to the initiation of ground or vegetation disturbance activities. Aquatic habitat will be provided for damage or loss of aquatic habitat and upland habitat will be provided for damage or loss of upland habitat. Compensation will be accomplished through the following options: 1) acquire land, by itself, or possibly in conjunction with a conservation organization, State park, State Wildlife Area, National Wildlife Refuge, or local regional park that provides occupied habitat; 2) purchase the appropriate credit units at a USFWS-approved conservation bank; 3) restore habitat to support California red-legged frog; or 4) other method as determined by USFWS ▶ If the final rule regarding the interpretation of the definition of take (Federal Register Vol. 90 No. 73, USFWS 2025) is approved and published prior to implementation of projects under the 2025 Blueprint EIR, instead of being required to follow the mitigation measures listed above, the project proponent will comply with the legal requirements of ESA as amended by the final rule and will provide mitigation as directed by USFWS or NOAA Fisheries (which could include the above, if directed). **California Tiger Salamander** ▶ If habitat potentially suitable for California tiger salamander is determined to be present within or in the vicinity of the area of impact, the implementing agency will retain a USFWS-approved biologist to conduct a pre-construction survey for California tiger salamander within the area of impact no more than 2 weeks before commencement of project construction activities. ▶ If California tiger salamander is found during surveys: ▪ When feasible, a 50-foot no-disturbance buffer will be constructed around burrows that provide suitable upland habitat for California tiger salamander. Burrows considered suitable for California tiger salamander will be determined by the USFWS-approved qualified biologist.		

Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		▪ All suitable burrows directly affected by construction will be hand excavated under the supervision of a qualified wildlife biologist. If California tiger salamanders are found, the biologist will relocate individuals to the nearest burrow that is outside of the area of impact. ▪ The biologist will conduct environmental awareness training for all construction personnel on required avoidance procedures and protocols if a California tiger salamander enters an active construction zone. ▪ For work conducted during the California tiger salamander migration season (November 1 to May 31): • Flagging will be placed around the area of impact during ground-disturbing activities after hand excavation of burrows has been completed. Flagging will also be placed around all spoils and stockpiles. No project activities will occur in the flagged area. A qualified biologist will visit the site weekly to ensure that the flagging is properly placed. Flagging design will be subject to the approval of USFWS. If flagging is not used, a qualified biological monitor will be on-site during all ground disturbance activities. • A qualified biologist will survey the area of impact (including access roads) in mornings following measurable precipitation events. Construction may commence once the biologist has confirmed that no California tiger salamanders are in the work area. ▪ Each day that work is conducted, the following will apply: • Prior to beginning work each day, underneath equipment and stored pipes greater than 1.2 inches in diameter will be inspected for California tiger salamander. If any are found, they will be allowed to move out of the construction area. • Trenches and holes within the area of impact will be covered and inspected daily for stranded individuals. Trenches and holes deeper than 1 foot will contain escape ramps (maximum slope of 2:1) to allow trapped individuals to escape uncovered holes or trenches. Holes and trenches will be inspected prior to filling. • All food and food-related trash will be enclosed in sealed trash containers at the end of each workday and removed completely from the area of impact once every three days to avoid attracting wildlife. • A speed limit of 15 mph will be maintained on dirt roads.		

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		• All equipment will be maintained such that there are no leaks of automotive fluids such as fuels, oils, and solvents. Any fuel or oil leaks will be cleaned up immediately and disposed of properly. • Plastic monofilament netting (erosion control matting) or similar material will not be used within the area of impact because California tiger salamander may become entangled or trapped. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds. • Hazardous materials (e.g., fuels, oils, solvents) will be stored in sealable containers in a designated location that is at least 100 feet from aquatic habitat. If it is not feasible to store hazardous materials 100 feet from wetlands and river and stream channels, then spill containment measures will be implemented to prevent the possibility of accidental discharges to wetlands and waters. • Prior to commencement of ground-disturbing activities (including vegetation disturbance activities) that would result in permanent loss of habitat for California tiger salamander, the implementing agency will implement the following measures to compensate for loss of California tiger salamander habitat: • The implementing agency will provide suitable in-kind habitat that will be created, restored, and/or set aside in perpetuity at a ratio of 3:1. Alternatively, credits will be purchased at a USFWS-approved conservation bank. Compensation plans will be subject to review and approval by USFWS. • In-kind habitat compensation will occur prior to initiation of ground or vegetation disturbance activities. Aquatic habitat will be provided for damage or loss of aquatic habitat and upland habitat will be provided for damage or loss of upland habitat. Compensation will be accomplished through the following options: 1) acquire land, by itself, or possibly in conjunction with a conservation organization, State park, State Wildlife Area, National Wildlife Refuge, or local regional park that provides occupied habitat; 2) purchase the appropriate credit units at a USFWS-approved conservation bank; 3) restore habitat to support the Central California tiger salamander; or 4) other method as determined by USFWS.		

Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		▶ If the final rule regarding the interpretation of the definition of take (Federal Register Vol. 90 No. 73, USFWS 2025) is approved and published prior to implementation of projects under the 2025 Blueprint EIR, instead of being required to follow the mitigation measures listed above, the project proponent will comply with the legal requirements of ESA as amended by the final rule and will provide mitigation as directed by USFWS or NOAA Fisheries (which could include the above, if directed). **Sierra Nevada Yellow-Legged Frog, Foothill Yellow-Legged Frog, Northern Leopard Frog, Southern Long-Toed Salamander, Western Spadefoot, and Yosemite Toad** ▶ If habitat potentially suitable for other special-status amphibians is determined to be present within or in the vicinity of the area of impact, the implementing agency will retain a qualified biologist familiar with the life cycle of special-status amphibians with potential to occur in the area of impact (e.g., Sierra Nevada yellow-legged frog, foothill yellow-legged frog, northern leopard frog, southern long-toed salamander, western spadefoot, Yosemite toad) to conduct a pre-construction survey prior to commencement of construction activities, including land clearing, within the area of impact and a 400-foot buffer around the area of impact. Surveys will consist of "walk and turn" surveys of areas beneath surface objects (e.g., rocks, leaf litter, moss mats, coarse woody debris) for salamanders and visual searches for frogs within upland and aquatic habitat. Surveys will be conducted within the appropriate season to maximize potential for observation for each species, and appropriate surveys will be conducted for the applicable life stages (i.e., eggs, larvae, adults). ▶ If no special-status amphibians are found, then no further mitigation will be required. ▶ If special-status amphibians are found during the protocol-level survey, then the implementing agency will consult with CDFW or USFWS, as appropriate. Mitigation measures will be approved by CDFW or USFWS and may include relocating individuals, placement of flagging for avoidance, and construction monitoring by a qualified biologist. No project activities will occur in the flagged area. The implementing agency will implement the agreed-upon mitigation measures to offset the loss of occupied habitat or individuals. ▶ A qualified biologist will be present during the grubbing and clearing activities in riparian and aquatic habitats in the area of impact.		

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		▶ For projects that include water work, egg and tadpole surveys will be conducted. If Sierra Nevada yellow-legged frog, foothill yellow-legged frog, or Yosemite toad eggs or tadpoles are identified in the work area, or within 250 feet downstream of the work area, work will stop, USFWS and CDFW will be notified to determine appropriate measures to avoid take of the species before work resumes, and water quality will be monitored so that the activity does not directly or indirectly harm eggs or tadpoles. ▶ If western spadefoot, which is currently proposed for listing, is listed under ESA by the time of implementation, the project proponent will implement the above measures in consultation with and with approval from USFWS. ▶ For federally listed species, if the final rule regarding the interpretation of the definition of take (Federal Register Vol. 90 No. 73, USFWS 2025) is approved and published prior to implementation of projects under the 2025 Blueprint EIR, instead of being required to follow the mitigation measures listed above, the project proponent will comply with the legal requirements of ESA as amended by the final rule and will provide mitigation as directed by USFWS or NOAA Fisheries (which could include the above, if directed). **Giant Garter Snake** ▶ If habitat potentially suitable for giant garter snake is determined to be present within or in the vicinity of the area of impact, the implementing agency will retain a qualified biologist to conduct a field investigation to delineate giant garter snake aquatic habitat within the area of impact and adjacent areas within 300 feet of the area of impact. Giant garter snake aquatic habitat includes agricultural ditches. ▶ The qualified biologist will conduct environmental awareness training for all construction personnel working on the project site on required avoidance procedures and protocols to implement if a giant garter snake enters an active construction zone. ▶ All construction activities within giant garter snake aquatic and upland habitat in and around the site will be conducted between May 1 and September 15, the active period for giant garter snakes. This would reduce direct impacts on the species because the snakes would be active and respond to construction activities by moving out of the way.		

Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		▶ If construction activities occur in giant garter snake aquatic habitat, aquatic habitat will be dewatered and then remain dry and absent of aquatic prey (e.g., fish and tadpoles) for 15 days prior to initiation of construction activities. If complete dewatering is not possible, the implementing agency will consult with CDFW and USFWS to determine what additional measures may be necessary to minimize effects to giant garter snake. After aquatic habitat has been dewatered 15 days prior to construction activities, flagging will be placed a minimum of 300 feet into adjacent uplands to isolate both the aquatic and adjacent upland habitat and the area will be avoided (i.e., no project activities will occur in the flagged area). In addition, high-visibility flagging will be erected to identify the construction limits and to protect adjacent habitat from encroachment of personnel and equipment, which will include all other giant garter snake habitat not described above, and the flagged area will be avoided by all construction personnel. The flagging and work area will be inspected by the approved biologist to ensure that fencing is intact and no snakes have entered the work area before the start of each workday. The flagging will be maintained by the contractor until completion of the project. ▶ Each day that work is conducted, the following will apply: ▪ During construction, an approved biologist experienced with giant garter snake identification and behavior will be on-site daily when construction activities within aquatic habitat or within 300 feet of aquatic habitat are taking place. The biologist will inspect the project site daily for giant garter snakes prior to that day's start of construction activities. ▪ If a giant garter snake is observed, the biologist will notify CDFW and USFWS immediately. Construction activities will be suspended in a 100-foot radius of the garter snake until the snake leaves the site on its own. If necessary, the biologist will consult with CDFW and USFWS regarding appropriate procedures for relocation. If the individual is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect giant garter snake within 1 business day to CDFW and USFWS. The biologist will report any take of listed species to USFWS immediately. Any worker who inadvertently injures or kills a giant garter snake or who finds one dead, injured, or entrapped must immediately report the incident to the approved biologist.		

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		▪ All excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within habitat suitable for giant garter snake will be inspected for giant garter snake by the approved biologist prior to being moved. ▪ If erosion control is implemented within the area of impact, non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure snakes are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials. ▶ The applicant will ensure that there is no-net-loss of giant garter snake habitat by compensating for loss of habitat at a ratio of 1:1, by purchasing credits from a USFWS-approved conservation bank. ▶ If the final rule regarding the interpretation of the definition of take (Federal Register Vol. 90 No. 73, USFWS 2025) is approved and published prior to implementation of projects under the 2025 Blueprint EIR, instead of being required to follow the mitigation measures listed above, the project proponent will comply with the legal requirements of ESA as amended by the final rule and will provide mitigation as directed by USFWS or NOAA Fisheries (which could include the above, if directed). **Northwestern Pond Turtle** ▶ If habitat potentially suitable for northwestern pond turtle is identified within or in the vicinity of the area of impact, the implementing agency will retain a qualified biologist familiar with the species to conduct a preconstruction survey in the area of impact 24 hours before initiation of ground-disturbing construction activities in habitat potentially suitable for the species. Surveys for northwestern pond turtle will be conducted throughout the area of impact and within approximately 1,500 feet of suitable aquatic habitat within or adjacent to the area of impact. ▶ If no northwestern pond turtles are found, then further mitigation will not be required.		

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		▶ If northwestern pond turtles or their nest sites are found, the biologist will contact CDFW to determine whether relocation and/or avoidance buffers and nest enclosures are appropriate. If CDFW approves of moving the individual, the biologist will be allowed sufficient time to move the northwestern pond turtle from the work site before work activities begin. ▶ If northwestern pond turtle, which is currently proposed for listing, is listed under ESA by the time of implementation, the applicant will implement the above measures in consultation with and with approval from USFWS. **Coast Horned Lizard** ▶ If habitat potentially suitable for coast horned lizard is determined to be present within or in the vicinity of the area of impact, the implementing agency will retain a qualified biologist familiar with coast horned lizard. ▶ Within 14 days before the initiation of construction activities or off-site improvements, a qualified biologist familiar with the life history of coast horned lizard shall conduct a preconstruction survey of habitat suitable for this species on the project site, which shall include walking linear transects of the site. ▶ If coast horned lizards are not detected during the preconstruction survey, the qualified biologist shall submit a report summarizing the results of the survey to the applicant and El Dorado County, and further mitigation shall not be required. ▶ If coast horned lizards are detected, a qualified biologist with an appropriate CDFW Scientific Collecting Permit that allows handling of reptiles shall be present during initial ground disturbance activities and shall inspect the project site before initiation of project activities. If coast horned lizards are detected, the qualified biologist shall move individuals into nearby suitable habitat that will not be disturbed by project activities **California Spotted Owl** ▶ If habitat potentially suitable for California spotted owl is determined to be present within the area of impact, the implementing agency will retain a qualified biologist to conduct protocol-level surveys for the species in suitable nesting habitat within 0.25 miles of the area of impact prior to initiation of construction activities. Surveys for California spotted owl will follow the *Protocol for Surveying for Spotted Owl in Proposed Management Activity Areas and Habitat Conservation Areas* (USFS 1993) or any protocol subsequently developed by USFWS should the species be listed. If applicable to location of project, US Forest Service biologists		

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		from either the Plumas National Forest, Tahoe National Forest, or El Dorado National Forest will be contacted to determine if they have any recent survey and occurrence data for California spotted owl that have not been made publicly available to determine presence within 0.25 miles of the project site. This can include other US Forest Service designated habitat for California spotted owl, such as protected activity centers or core areas. ▶ If California spotted owl is determined to not be present within 0.25 miles of the project site, then further mitigation will not be required. ▶ If nesting California spotted owl or other California spotted owl habitat designated by the US Forest Service are identified within the area of impact or within 0.25 miles of the area of impact, project activities will be delayed within 0.25 miles of the area of impact between March 1 and August 31 to avoid disturbances to or loss of the active nest site until the nest is no longer active. Project activities include vegetation removal, earth moving, and construction. This buffer may be reduced through consultation with CDFW or USFWS if this species is listed under ESA by the time of implementation. The following will also apply: ▪ The project applicant will not remove any trees between September 1 and February 28 that contain active nest sites for California spotted owl during the breeding season. Once a qualified biologist has deemed a nest site inactive for 2 consecutive years, the restriction to protect the nest tree will be lifted. ▪ If California spotted owl, which is currently proposed for listing, is listed under ESA by the time of implementation, the applicant will implement the above measures in consultation with and approval from USFWS. ▶ If avoiding work between March 1 and August 31 is not feasible, a no disturbance buffer of 0.25 mile will be established around active California spotted owl nests and any other US Forest Service California spotted owl designated habitat (e.g., protected activity center) and no construction activities will occur within this buffer until the chicks have fledged as determined by a qualified Registered Professional Forester or biologist. American Goshawk ▶ If habitat potentially suitable for American goshawk (previously northern goshawk) is determined to be present within the area of impact, the implementing agency will retain a qualified biologist to conduct protocol-level surveys for the species in suitable nesting habitat within 0.25 miles of the area of impact prior to initiation of construction activities. Surveys for American goshawk		

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		will follow the *Northern Goshawk Inventory and Monitoring Technical Guide* (Woodbridge and Hargis 2006), or another appropriate method determined by the appropriate regulatory agency. If applicable to location of project, US Forest Service biologists from either the Plumas National Forest, Tahoe National Forest, or El Dorado National Forest will be contacted to determine if they have any recent survey and occurrence data for American goshawk that have not been made publicly available to determine presence within 0.25 miles of the project site. This can include other US Forest Service designated habitat for American goshawk, such as protected activity centers. ▶ If no American goshawk nests are found, then further mitigation will not be required. ▶ If nesting American goshawk or other American goshawk habitat designated by the US Forest Service are identified within the area of impact or within 0.25 miles of the area of impact, project activities will be delayed within 0.25 miles of the area of impact between March 15 and August 15 to avoid disturbances to or loss of an active nest site, until the nest is no longer active. Project activities include vegetation removal, earth moving, and construction. This buffer may be reduced through consultation with CDFW. ▶ If avoiding work between March 15 and August 15 is not feasible, a no disturbance buffer of 0.25 mile will be established around active American goshawk nests and any other US Forest Service American goshawk designated habitat (e.g., protected activity center) and no construction activities will occur within this buffer until the chicks have fledged as determined by a qualified Registered Professional Forester or biologist. **Great Gray Owl** ▶ If habitat potentially suitable for great gray owl is determined to be present within the area of impact, the implementing agency will retain a qualified biologist to conduct protocol-level surveys for the species in suitable nesting habitat within 0.25 miles of the area of impact prior to initiation of construction activities. Surveys for great gray owl will follow the *Survey Protocol for Great Gray Owl (*Strix nebulosa*) within the Northwest Forest Plan Area* (Huff and Goodwin 2016), or another appropriate method determined by the appropriate regulatory agency. ▶ If no great gray owl nests are found, then further mitigation will not be required.		

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		▶ If great gray owl nests are identified in the area of impact or within 0.25 miles of the area of impact, project activities will be delayed within 0.25 miles of the area of impact between March 15 and July 15 to avoid disturbances to or loss of an active nest site, until the nest is no longer active. Project activities include vegetation removal, ground disturbance, and construction. This buffer may be reduced through consultation with CDFW. **Swainson's Hawk** ▶ If habitat potentially suitable for Swainson's hawk is identified within or in the vicinity of the area of impact, and if construction activities occur between February 1 and August 31, the implementing agency will retain a qualified biologist to conduct surveys for Swainson's hawk in accordance with the Swainson's Hawk Technical Advisory Committee 2000 guidelines (SHTAC 2000), or current guidance. Surveys will cover a minimum of a 0.5-mile radius around the construction area. ▶ If no Swainson's hawk nests are detected, then further mitigation will not be required. ▶ If nesting Swainson's hawks are detected, a no disturbance buffer of between 0.25-miles and 0.5-miles will be established around nest occurrences, depending on the level of existing human disturbance in the vicinity of the nest site. Buffers will be maintained until a qualified biologist has determined that the young have fledged. ▪ The buffer may be adjusted if, in consultation with CDFW, a qualified biologist determines that an alternative buffer will not result in take of Swainson's hawks adults, young, or eggs because of particular site features (e.g., topography, natural line-of-sight barriers), level of project disturbance, or other considerations. If the buffer is reduced, a qualified biologist will monitor the behavior of the Swainson's hawks during all project activities within 0.25 miles or 0.5 miles (depending on the level of existing human disturbance in the vicinity of the nest site) of the nesting Swainson's hawk. If the Swainson's hawks are disturbed or agitated (e.g., vocalizations, fluffing feathers to increase body size appearance) by the project activities, the biologist will have the authority to halt the activities and re-establish a buffer consistent with the bullet directly above until the agitated behavior ceases and normal behavior resumes.		

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		▶ If potential nesting trees are to be removed during construction activities, removal will take place outside of Swainson's hawk nesting season and the implementing agencies will develop a plan, in consultation with CDFW, to replace known nest trees at a ratio of 3:1. If replacement planting is implemented, monitoring will be conducted annually for 5 years to assess the mitigation's effectiveness. The plan will include a performance standard for the mitigation that results in a no net loss of nesting habitat. ▶ If foraging habitat (e.g., annual grassland, agricultural land) is removed as a result of the project, mitigation will occur at a 1:1 ratio, which may be achieved through the dedication of a conservation easement, purchasing appropriate mitigation bank credits, or another CDFW approved action. **Burrowing Owl** ▶ If proposed activities are implemented in habitat suitable for burrowing owls, a qualified biologist will conduct surveys for burrowing owls in areas of habitat suitable for the species on and within 1,640 feet (500 meters) of the project site. Inaccessible areas (e.g., adjacent private property) will not be surveyed directly, but the biologist may use binoculars or a spotting scope to survey these areas. A minimum of four surveys will be conducted to determine whether burrowing owls occupy the site. Surveys will be conducted according to Appendix D of the 2012 *Staff Report on Burrowing Owl Mitigation* prepared by the California Department of Fish and Game (now CDFW) (CDFG 2012), or any subsequent updated guidance. If feasible, at least one survey should be conducted between February 15 and April 15 and the remaining surveys should be conducted between April 15 and July 15, at least three weeks apart. Because burrowing owls may recolonize a site after only a few days, one of the surveys, or an additional survey, will be conducted no less than 14 days before initiating ground disturbance activities to verify that take of burrowing owl would not occur. ▶ If no burrowing owls are found, the qualified biologist will submit a report documenting the survey methods and results to the lead agency, and no further mitigation will be required. ▶ If a burrow occupied by a burrowing owl is found during the surveys, the project applicant will establish and maintain a buffer around the occupied burrow and any identified satellite burrows (i.e., non-nesting burrows that burrowing owls use to escape predators or move young into after hatching) to prevent take of the burrowing owls.		

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		▪ During the non-breeding season (September 1 through January 31), the minimum buffer distance will be 164 feet (50 meters). During the breeding season (February 1 through August 31), the minimum buffer distance will be increased to 1,640 feet (500 meters). ▪ The buffer may be adjusted if, in consultation with CDFW, a qualified biologist determines that an alternative buffer will not result in take of burrowing owl adults, young, or eggs because of particular site features (e.g., topography, natural line-of-sight barriers), level of project disturbance, or other considerations. If the buffer is reduced, a qualified biologist will monitor the behavior of the burrowing owls during all project activities within 1,640 feet of the burrow. If the owls are disturbed or agitated (e.g., vocalizations, bill snaps, fluffing feathers to increase body size appearance, drooping wings and rotating them forward, crouching and weaving back and forth) by the project activities, the biologist will have the authority to halt the activities and re-establish a buffer consistent with the bullet directly above until the agitated behavior ceases and normal behavior resumes. ▪ The buffer will remain in place around the occupied burrow and associated satellite burrows until a qualified biologist has determined through noninvasive methods that the burrows are no longer occupied by burrowing owl. A previously occupied burrow will be considered unoccupied if surveys demonstrate that no owls have used the burrow for seven consecutive days. ▪ Locations of burrowing owls detected during surveys will be reported to the CNDDB. ▶ If implementation of a buffer to prevent take of burrowing owl is not feasible, the project applicant will consult with CDFW. ▶ The project applicant will compensate for the loss of burrowing owl by establishing permanent protection and perpetual management on land that provides burrowing owl habitat. Habitat management lands for burrowing owl may be established by conservation easement or fee title or credits may be purchased from a CDFW-approved conservation or mitigation bank **Other Special-Status Raptors** ▶ If habitat potentially suitable for other nesting special-status raptors (e.g., ferruginous hawk [*Buteo regalis*], golden eagle, bald eagle, northern harrier) or common raptors protected under California Fish and Game Code (e.g., red-tailed hawk, red-shouldered hawk) is identified within the area of impact or within 0.5		

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		miles of the area of impact for golden eagle, 0.25 miles of the area of impact for bald eagle and American peregrine falcon, and 500 feet of the area of impact for all other raptors, all tree removal activities and construction activities will occur during the nonbreeding season (September 1 through January 31), if feasible. ▶ If tree removal or other construction activities must occur between February 1 and August 31, the implementing agency will retain a qualified biologist to conduct a preconstruction survey for nesting raptors within 0.5 miles, 0.25 miles, or 500 feet, depending on the species (see bullet above) of the area of impact no more than 7 days prior to initiation of construction. ▶ If no nests are detected, then further mitigation will not be required. ▶ If nests are detected, impacts on nesting raptors, including direct impacts and indirect impacts (e.g., noise, presence of construction crews) will be avoided by establishing appropriate buffers around active nest sites identified during preconstruction nest surveys. Factors to be considered for determining buffer size will include the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffer size may be adjusted if the qualified biologist, in consultation with CDFW, determines that such an adjustment will not be likely to adversely affect the nest. The buffer areas will be flagged for avoidance, and no activity will occur within the buffer areas until the qualified biologist has determined, in coordination with CDFW, that the young have fledged, the nest is no longer active, or reducing the buffer would not likely result in nest abandonment. Monitoring of the nest by a qualified biologist during and after construction activities will be required if the activity has potential to adversely affect the nest. ▶ If bald or golden eagle nests are found during preconstruction surveys, then the nest tree will not be removed. ▶ Disturbance, injury, or mortality of bald eagle, California condor, golden eagle, and white-tailed kite will be completely avoided. **Western Yellow-Billed Cuckoo, Least Bell's Vireo, and Willow Flycatcher** ▶ If habitat potentially suitable for western yellow-billed cuckoo, least Bell's vireo, or willow flycatcher is determined to be present within or in the vicinity of the area of impact, the implementing agency will retain a qualified biologist to conduct protocol-level surveys for these species following the guidance offered in *A Natural History Summary and Survey Protocol for the Western Distinct Population*		

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		Segment of the Yellow-billed Cuckoo (Halterman et al. 2016); *Least Bell's Vireo Survey Guidelines* (USFWS 2001); *A Survey Protocol for Willow Flycatcher in California* (Bombay et al. 2003) and/or current industry standards, and the implementing agencies will initiate consultation with USFWS and CDFW. ▶ If no nests or territories are detected, then further mitigation will not be required. ▶ If nests are detected, the implementing agency will establish buffers around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely affected by construction. No-disturbance buffers around active nests will be a minimum of 250 feet, unless a qualified biologist determines that smaller buffers would be sufficient to avoid impacts on nesting birds in consultation with CDFW or USFWS. Factors to be considered for determining buffer size will include: the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers will be maintained until a qualified biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival. **Other Special-Status Birds** ▶ If habitat potentially suitable for other special-status nesting birds (e.g., bank swallow [*Riparia riparia*], black swift [*Cypseloides niger*], grasshopper sparrow [*Ammodramus savannarum*], loggerhead shrike; see Appendix C-2 for full list) or other native nesting birds protected under section 3503 of the California Fish and Game Code is identified within the area of impact or within 100 feet of the area of impact, all tree removal activities and construction activities will occur during the nonbreeding season (September 1–January 31), if feasible. If tree removal or other construction activities must occur between February 1 and August 31, the implementing agency will retain a qualified biologist to conduct protocol-level nest surveys within 500 feet of the area of impact no more than 7 days prior to initiation of construction. ▶ If no nests are detected, then further mitigation will not be required. ▶ If nests are detected, direct impacts and indirect impacts (e.g., noise, presence of construction crews) will be avoided by establishing appropriate buffers around active nest sites. Factors to be considered for determining buffer size will include the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffer size may be adjusted if the qualified biologist, in consultation with		

Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		CDFW or USFWS, determines that such an adjustment would not be likely to adversely affect the nest. The buffer areas will be flagged, and no activity will occur within the buffer areas until the qualified biologist has determined, in coordination with CDFW or USFWS, that the young have fledged, the nest is no longer active, or reducing the buffer would not likely result in nest abandonment. Monitoring of the nest by a qualified biologist during and after construction activities will be required if the activity has potential to adversely affect the nest. ▶ Disturbance, injury, or mortality of California black rail, greater sandhill crane will be completely avoided. Special-Status Fish ▶ If aquatic habitat potentially suitable for special-status fish is identified within the area of impact, and construction activities could result in adverse effects on this habitat, impacts on these species will be avoided by implementing the following measures: ▪ All work within waters where there is potential for Delta smelt (*Hypomesus transpacificus*) to occur, as defined in the most recent USFWS guidance, will be confined to a seasonal work window of August 1 through November 30 when Delta smelt are least likely to be present. Because this species does not regulate its movement strictly within this time frame, modification to the work windows may be approved by USFWS prior to project implementation based on information from the various in-Delta monitoring programs. ▪ In-water construction activities where there is potential for steelhead and/or Chinook salmon to occur will be limited to the low-flow period between June 1 and October 1 to minimize the potential of adverse effects on federally listed anadromous salmonids during their emigration period. ▪ In-channel construction activities that could affect habitat for listed anadromous salmonids will be limited to daylight hours during weekdays, leaving a nighttime and weekend period of passage for these fish species. ▪ Construction best management practices for off-channel staging and storage of equipment and vehicles will be implemented to minimize the risk of contamination of streams and rivers by spilled materials. Best management practices will also include minimization of erosion and stormwater runoff, as appropriate.		

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		▪ If bank stabilization activities are necessary, then such stabilization will be constructed to minimize predator habitat, minimize erosion potential, and contain material suitable for supporting riparian vegetation. ▶ For federally listed species, if the final rule regarding the interpretation of the definition of take (Federal Register Vol. 90 No. 73, USFWS 2025) is approved and published prior to implementation of projects under the 2025 Blueprint EIR, instead of being required to follow the mitigation measures listed above, the project proponent will comply with the legal requirements of ESA as amended by the final rule and will provide mitigation as directed by USFWS or NOAA Fisheries (which could include the above, if directed). **Crotch's Bumble Bee** ▶ If habitat potentially suitable for Crotch's bumble bee is identified within the area of impact, and this habitat cannot be avoided, the applicant will retain a qualified biologist familiar with bumble bees of California, and with experience using survey methods for bumble bees, to conduct focused surveys of habitat potentially suitable for Crotch's bumble bee within the project site. *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* (CDFW 2023) will be used to guide surveys. ▶ If no Crotch's bumble bees are not detected during focused surveys, the survey results will be submitted to the appropriate County, and no further mitigation will be required. ▶ If Crotch's bumble bees are detected during focused surveys, the survey results will be submitted to the lead agency, and appropriate avoidance measures will be implemented in consultation with and with approval from CDFW. Avoidance measures may include the following, if feasible: ▪ Protective buffers will be implemented around active overwintering or breeding colonies until the colonies are no longer active. ▪ Construction activities will occur from October through February to avoid the bumble bee flight season. ▪ Construction activities, including ground disturbance, will be conducted using a phased approach, such that the entirety of the habitat is not removed at once; the objective of this measure is to provide refuge for bumble bees during project activities and temporary retention of suitable floral resources proximate to the active construction areas.		

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		Monarch
		▶ If habitat potentially suitable for monarch is identified in the area of impact, and this habitat cannot be avoided, the following will apply:
		  ▪ If construction activities (e.g., ground disturbance, vegetation removal, staging) on the project site occur during the period when milkweed plants may host monarch eggs or caterpillars (approximately mid-March through late September, depending on elevation and other factors) a qualified biologist will survey the project site for milkweed plants.
		  ▪ If milkweed plants are found, a qualified biologist will inspect the milkweed plants for the presence of monarch eggs or caterpillars no more than 14 days before plant removal. If monarch eggs or caterpillars are detected, the milkweed plants will be avoided until they are no longer being used by monarch caterpillars, as confirmed by a qualified biologist, if feasible.
		  ▪ If no eggs or caterpillars are detected, no additional protection measures are necessary
		▶ If monarch, which is currently proposed for listing, is listed under ESA, the applicant will implement the above measures in consultation with and with approval from USFWS.
		Special-Status Vernal Pool Invertebrates
		▶ If habitat potentially suitable for vernal pool invertebrate species (i.e., Conservancy fairy shrimp, midvalley fairy shrimp [*Branchinecta mesovallensis*], vernal pool fairy shrimp, vernal pool tadpole shrimp, Ricksecker's water scavenger beetle [*Hydrochara ricksecker*i]) is identified within the area of impact, and this habitat cannot be avoided, the implementing agency will retain a qualified biologist to conduct vernal pool invertebrate surveys in the area of impact and within 250 feet from the edge of the area of impact to evaluate direct and indirect effects on vernal pools in accordance with the *Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California* (USFWS 1996).
		▶ Habitat Preservation: The implementing agencies will compensate for indirect effects of the project on habitat for vernal pool invertebrates at a sufficient ratio for no net loss of habitat function or acreage, by purchasing vernal pool preservation credits from a USFWS-approved conservation bank, or from another		

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		USFWS-approved conservation bank. Compensation credits will be purchased prior to any ground-disturbing activities. ▶ Habitat Creation: The implementing agencies will compensate for the direct effects of the project on habitat for vernal pool invertebrates at a sufficient ratio for no net loss of habitat function or acreage, by purchasing vernal pool creation credits from a USFWS-approved conservation bank, or from another USFWS-approved conservation bank. ▶ For seasonal wetlands and drainages that will be retained in the area of impact (i.e., those not proposed to be filled), a minimum no-disturbance buffer of at least 50 feet from these features will be implemented in the project area. The buffer area will be flagged with high visibility construction flagging prior to commencement of ground-disturbing activities and will be maintained for the duration of construction activities. All flagged areas will be avoided. ▶ For federally listed species, if the final rule regarding the interpretation of the definition of take (Federal Register Vol. 90 No. 73, USFWS 2025) is approved and published prior to implementation of projects under the 2025 Blueprint EIR, instead of being required to follow the mitigation measures listed above, the project proponent will comply with the legal requirements of ESA as amended by the final rule and will provide mitigation as directed by USFWS or NOAA Fisheries (which could include the above, if directed). **Valley Elderberry Longhorn Beetle** ▶ If elderberry shrub habitat suitable for valley elderberry longhorn beetle is identified in the area of impact, the implementing agency will retain a qualified biologist to conduct surveys for valley elderberry longhorn beetle according to the protocol outlined in USFWS *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (USFWS 2017). The biologist will determine if there is a riparian area or known valley elderberry longhorn beetle records within 2,526 feet (800 meters) of the project site, and whether the project site is continuous with a historical riparian corridor. ▶ If the project site does not contain riparian habitat, but does contain elderberry shrubs, then the elderberry shrubs will be inspected for valley elderberry longhorn beetle exit holes. If exit holes are not present the implementing agency will consult with USFWS and will consider additional information, including occurrences of valley elderberry longhorn beetle within 800 meters of the project site, and proximity of the project site to existing and historic riparian corridors.		

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		▶ If riparian habitat is present within the project site and elderberry shrubs are present within 165 feet, then it is likely that the site is occupied by valley elderberry longhorn beetle. If the project site contains riparian habitat and elderberry shrubs are not present within 165 feet, the implementing agency will consult with USFWS, as presence of riparian habitat is indicative of historic valley elderberry longhorn beetle occupancy. ▶ Impacts on valley elderberry longhorn beetle will be avoided and minimized by following the Conservation Measures outlined in the USFWS 2017 Framework for cases where elderberry shrubs can be retained and protected within 165 feet of the project footprint. ▶ If elderberry shrubs are 165 feet or more from project activities, direct or indirect impacts are not expected. Shrubs will be protected during construction by establishing and maintaining high visibility flagging at least 165 feet from the drip line of each elderberry shrub. Flagged areas will be avoided. ▶ If elderberry shrubs can be retained within the project footprint, project activities may occur up to 20 feet from the dripline of elderberry shrubs if precautions are implemented to minimize the potential for indirect impacts. Specifically, these minimization measures include: ▪ All areas to be avoided during construction activities will be flagged as close to construction limits as possible. ▪ A minimum avoidance area of at least 20 feet from the dripline of each elderberry plant will be maintained to avoid direct impacts that could damage or kill the plant. ▪ A qualified biologist will provide training for all contractors, work crews, and any onsite personnel on the status of valley elderberry longhorn beetle, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for non-compliance. ▪ A qualified biologist will monitor the work area at project-appropriate intervals to assure that all avoidance and minimization measures are implemented. The amount and duration of monitoring will depend on the project specifics and will be discussed with a USFWS biologist. ▪ As much as feasible, all activities that could occur within 165 feet of an elderberry shrub will be conducted outside of the flight season of the valley elderberry longhorn beetle (March–July).		

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		▪ Trimming of elderberry shrubs will occur between November and February and will avoid removal of any branches or stems that are greater than or equal to 1 inch in diameter to avoid and minimize adverse effects to valley elderberry longhorn beetle. ▪ Project activities, such as truck traffic or other use of machinery, will not create excessive dust on the project site, such that the growth or vigor of elderberry shrubs is adversely affected. Enforcement of a speed limit and watering dirt roadways are potential methods to minimize excessive dust creation. ▪ Herbicides will not be used within the dripline of any elderberry shrub. Insecticides will not be used within 98 feet of any elderberry shrub. All chemicals will be applied using a backpack sprayer or similar direct application method. Mechanical weed removal within the dripline of any elderberry shrub will be limited to the season when adults are not active (August–February) and will avoid damaging the elderberry. ▪ Erosion control will be implemented, and the affected area will be re-vegetated with appropriate native plants. ▶ If elderberry shrubs cannot be avoided, consultation with USFWS will be required. Conservation and minimization measures are likely to include preparation of supporting documentation that describes methods for relocation of existing shrubs and maintaining existing shrubs and other vegetation in a conservation area. All elderberry shrubs with stems greater than 1 inch in diameter that cannot be avoided or have been adversely affected by indirect damage to stems of the entire shrub will be transplanted. ▶ Relocation of existing elderberry shrubs and planting of new elderberry seedlings and associated riparian species will be implemented according to the Framework (USFWS 2017). The Framework uses presence or absence of exit holes, and whether the affected elderberry shrubs are located in riparian habitat to determine the number of elderberry seedlings or cuttings and associated riparian vegetation that would need to be planted as compensatory mitigation for affected valley elderberry longhorn beetle habitat. Compensatory mitigation may include purchasing credits at a USFWS-approved conservation bank, providing on-site mitigation, or establishing and protecting habitat for valley elderberry longhorn beetle.		

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		▶ If the final rule regarding the interpretation of the definition of take (Federal Register Vol. 90 No. 73, USFWS 2025) is approved and published prior to implementation of projects under the 2025 Blueprint EIR, instead of being required to follow the mitigation measures listed above, the project proponent will comply with the legal requirements of ESA as amended by the final rule and will provide mitigation as directed by USFWS or NOAA Fisheries (which could include the above, if directed). **Special-Status Bats** ▶ If habitat suitable for bat roosts or bat colonies is identified in the area of impact that may be adversely affected by construction activities, the implementing agency will retain a qualified biologist to conduct a preconstruction bat survey no more than 14 days prior to the start of construction. The survey may include investigation of habitat for special-status bats (e.g., rocky outcrops, trees, snags, bridges, mines, caves, human-made structures) for bat use (e.g., guano), and/or an evening emergence survey. If evidence of bat use is observed, the species and number of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts. ▶ If no bat roosts are observed, further mitigation will not be required. ▶ If surveys confirm bats daytime-roost will be affected by construction activities, a Bat Exclusion Plan will be developed by the implementing agency and submitted to CDFW for review and approval prior to its implementation. No bat exclusion will occur between March 1 and August 15 (depending on location) which coincides with the maternity season in California. ▶ If a winter roost, a maternity roost, or any roost of a special-status bat species (i.e., pallid bat, spotted bat, Townsend's big-eared bat, western mastiff bat, western red bat) is found, a mitigation program addressing mitigation for the specific occurrence will be submitted to CDFW by the implementing agency and qualified biologist for review and approval to determine whether measures are appropriate. The mitigation plan will establish a buffer area around the colony during hibernation or while females in maternity colonies are nursing young that is large enough to prevent disturbance to the colonies. **American Badger** ▶ If burrow habitat potentially suitable for American badger is identified within the area of impact, the implementing agency will retain a qualified biologist to conduct a preconstruction survey for American badger. The survey will be		

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		conducted no more than 30 days prior to initiation of construction and will include visual inspection (e.g., direct observation, monitoring, trail camera) of suitable burrows to determine whether they are occupied. ▶ If no occupied burrows are found, further mitigation will not be required. ▶ If occupied burrows are found, impacts on active badger dens will be avoided by flagging exclusion zones around all active badger dens, within which construction activities will be prohibited until denning activities are complete or the den is abandoned. The qualified biologist will monitor each den once per week to track the status of the den and to determine when it is no longer occupied. Special-Status Forest Carnivores ▶ If habitat potentially suitable for wolverine, fisher, or Sierra Nevada red fox is identified in the area of impact, the implementing agency will retain a qualified biologist to conduct a preconstruction survey prior to commencement of construction activities (e.g., tree removal, ground disturbance) for these species within the area of impact and a 0.25 miles buffer of the area of impact. ▶ If individuals or potential or occupied dens are not found, further mitigation will not be required. ▶ If wolverine, fisher, or Sierra Nevada red fox are identified, or if potential dens of these species are located, an appropriate method will be used by a qualified wildlife biologist to confirm whether the den is occupied. This may involve use of remote field cameras, track plates, or hair snares. Other devices such as fiber optic scope may be utilized to determine occupancy. If the potential den is not occupied, the entrance will be temporarily blocked so that no other animals occupy the area during the construction period but only after it has been fully inspected. The blockage will be removed once construction activities have been completed. ▶ If a den is found to be occupied by one of these species, a no-disturbance buffer will be placed around the occupied den location. The no-disturbance buffer will include the den tree (or other structure) plus a suitable buffer as determined by the biologist in coordination with USFWS or CDFW, as appropriate depending on species status. Construction activities in the no-disturbance buffer will be avoided until the den is no longer occupied as determined by a qualified wildlife biologist in coordination with USFWS and CDFW. ▶ Disturbance, injury, or mortality of California wolverine will be avoided.		

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		Northern California Ringtail ▶ If habitat potentially suitable for northern California ringtail is identified within the area of impact the implementing agency will retain a qualified biologist to conduct preconstruction surveys to identify individual northern California ringtails and potential nests. ▶ If individuals or potential or occupied nests are not found, further mitigation will not be required. ▶ If northern California ringtail or potential nests are found, an appropriate method will be used by the qualified biologist to confirm whether a northern California ringtail is occupying the nest (e.g., remote field cameras, track plates, hair snares, fiber optic scope). ▶ If a nest is determined to be occupied by a northern California ringtail, a buffer will be established around the nest tree (or other nest structure) sufficient to protect the nest from construction disturbance as determined by the qualified biologist in coordination with CDFW. No construction activities will occur within the buffer until the nest is unoccupied as determined by a qualified wildlife biologist in coordination with CDFW. ▶ Disturbance, injury, or mortality of northern California ringtail will be avoided. **Salt-Marsh Harvest Mouse** ▶ If habitat potentially suitable for salt-marsh harvest mouse is identified within the area of impact or within 100 feet of the area of impact, all habitat for salt-marsh harvest mouse including pickleweed (*Arthrocnemum* spp.) will be avoided, if feasible. ▶ If avoidance is not feasible, pickleweed and other vegetation in habitat potentially suitable for the species will be removed by hand (i.e., with non-motorized equipment). While removal occurs, a USFWS-approved biologist will monitor in front of the vegetation removal, walking at a safe distance in front of vegetation removal equipment to ensure no salt marsh harvest mice are present. The following will also apply: ▪ Prior to initiation of work activities within suitable habitat, the USWFS-approved biologist will survey the work area for the presence of salt marsh harvest mice and their nests.		

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		▪ Surveys will be repeated daily prior to the beginning project activities at the proposed project site; one or more USFWS-approved biologists will survey the proposed project site to ensure it is clear of salt marsh harvest mice. ▪ Project activities will be restricted to daylight hours 30 minutes after sunrise and 30 minutes before sunset. ▪ Project activities will avoid high tides and periods when the marsh plain is inundated. ▪ Additional measures for vegetation removal will apply and are as follows: • Vegetation removal will move in a direction toward salt marsh harvest mouse habitat and continue in a uniform direction. • Vegetation will be removed to bare ground or stubble no higher than 1 inch. Vegetation will be cut in at least two passes: with the first pass cutting vegetation at approximately half of its height above the ground (mid-canopy) and the next pass, or subsequent passes, cutting vegetation to ground-level or no higher than 1 inch. • Cut vegetation will not be piled in the area where vegetation removal is taking place (what will be the avoidance area). It will be removed from the avoidance area as it is being cut, so that no standing or cut vegetation remains in the avoidance area when flagging is installed. ▪ While work is occurring, flagging will be placed around the defined work area prior to the start of construction or other ground disturbing activities and immediately after vegetation removal. No project activities will occur in the flagged area. ▪ The USWFS-approved biologist will conduct daily surveys to ensure that the flagging is intact and that no mice have entered the project area. ▶ If the final rule regarding the interpretation of the definition of take (Federal Register Vol. 90 No. 73, USFWS 2025) is approved and published prior to implementation of projects under the 2025 Blueprint EIR, instead of being required to follow the mitigation measures listed above, the project proponent will comply with the legal requirements of ESA as amended by the final rule and will provide mitigation as directed by USFWS or NOAA Fisheries (which could include the above, if directed).		

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		Special-Status Rabbits and Sierra Nevada Mountain Beaver ▶ If habitat potentially suitable for Sierra Nevada snowshoe hare, western white-tailed jackrabbit, and Sierra Nevada mountain beaver is identified within the area of impact, the implementing agency will retain a qualified biologist to conduct preconstruction surveys for these species. Surveys will include visual surveys for individuals and potential nests (e.g., shallow forms, cavities, depressions beneath brush). ▶ If individuals or potential or occupied nests are not found, further mitigation will not be required. ▶ If occupied nests are observed, a buffer will be established including the nest plus a suitable buffer as determined by the qualified biologist in coordination with CDFW. No construction activities will occur within the buffer until the nest is unoccupied as determined by a qualified wildlife biologist in coordination with CDFW. **Marysville California Kangaroo Rat** ▶ If habitat potentially suitable for Marysville California kangaroo rat is identified within the area of impact or within 100 feet of the area of impact, the implementing agency will retain a qualified biologist to conduct preconstruction surveys within 60 days prior to ground disturbing construction activities. The survey will include burrow searches within 100 feet of the area of impact. ▶ If suitable burrows are not found, further mitigation will not be required. ▶ If suitable burrows for this species are identified, focused live trapping surveys may be conducted by a qualified biologist to determine whether the burrows are being used by Marysville California kangaroo rat. If live trapping is not conducted or if live-trapping survey results are inconclusive, a 50-foot buffer will be established around suitable burrows. No construction activities will occur within the buffer until the burrow is unoccupied as determined by a qualified wildlife biologist in coordination with CDFW.		
Impact 3.4-2: Have a Substantial Adverse Effect on any Riparian Habitat, Sensitive Natural Community, or Other Sensitive Habitats, Including Those Identified in Local or Regional Plans, Policies, or Regulations by CDFW or USFWS	PS	**Implement Mitigation Measure 3.4-1: Conduct a Biological Resources Assessment** **Mitigation Measure 3.4-4: Avoid, Minimize, and Mitigate Impacts on Riparian Habitat, Sensitive Natural Communities, and Other Sensitive Habitats** If the qualified biologist, after implementation of Mitigation Measure 3.4-1, determines that riparian habitat, sensitive natural communities, or other sensitive habitats are present within the area of impact and could be adversely affected by construction activities, then the following measures will be implemented:	LTS	SU

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		▶ To the extent practicable, and in consideration of other design requirements and constraints (e.g., meeting primary project objectives and needs, avoidance of other sensitive resources), the implementing agency will attempt to design the proposed projects in a way that minimizes the removal of native riparian habitat, sensitive natural communities, and other sensitive habitats, particularly trees that contribute to the overstory canopy of these communities. ▶ The implementing agency will compensate for permanent loss of riparian habitat at a sufficient ratio, which may be achieved through a combination of on-site restoration/creation, off-site restoration, preservation, or mitigation credits. If mitigation credits are not available, stream and riparian habitat compensation will include the establishment of riparian vegetation on currently unvegetated bank portions of streams affected by the project and enhancement of existing riparian habitat through removal of nonnative species, where appropriate, and planting additional native riparian plants to increase cover, continuity, and width of the existing riparian corridor along streams on the project site and surrounding areas. Construction activities and compensatory mitigation will l include development of a Compensatory Stream and Riparian Mitigation and Monitoring Plan for creating or restoring in-kind habitat in the surrounding area. The Compensatory Stream and Riparian Mitigation and Monitoring Plan will include the following: ▪ identification of compensatory mitigation sites and criteria for selecting these mitigation sites; ▪ in-kind reference habitats for comparison with compensatory riparian habitats (using performance and success criteria) to document success; ▪ monitoring protocol, including schedule and annual report requirements (compensatory habitat will be monitored for a minimum of 5 years from completion of mitigation, or human intervention [including recontouring and grading], or until the success criteria identified in the approved mitigation plan have been met, whichever is longer); ▪ ecological performance standards, based on the best available science and including specifications for native riparian plant densities, species composition, amount of dead woody vegetation gaps and bare ground, and survivorship; at a minimum, compensatory mitigation planting sites must achieve 80 percent survival of planted riparian trees and shrubs by the end of the 5-year maintenance and monitoring period or dead and dying trees will be replaced and monitoring continued until 80 percent survivorship is achieved;		

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		▪ corrective measures if performance standards are not met; ▪ responsible parties for monitoring and preparing reports; and ▪ responsible parties for receiving and reviewing reports and for verifying success or prescribing implementation or corrective actions. ▶ If oak woodland habitat is removed, the implementing agency will determine if the loss of oak woodland would have a significant impact on the environment. If so, an oak woodland mitigation plan will be developed that to offset the loss of habitat acreage and function, which may be achieved through a combination of restoration/creation, preservation, or mitigation credits. At a minimum, the restoration and monitoring plan will include clear goals and objectives, success criteria, specifics on restoration/creation (e.g., plant palette, soils, irrigation), specific monitoring periods and reporting guidelines, and a maintenance plan. Oak woodland restoration or creation will be monitored for a minimum of 5 years and will be considered successful when at least 75 percent of all plantings have become successfully established. Such mitigation sites will be dedicated either in fee or as an easement in perpetuity held by a qualified agency. Guaranteed funding for maintenance of the mitigation sites will be established. ▶ If losses of sensitive natural communities or other habitats recognized as sensitive by CDFW (see Appendix C-3) would be substantial, then additional compensation will be provided through creating, restoring, or preserving in perpetuity in-kind communities to offset the loss of habitat function or acreage.		
Impact 3.4-3: Have a Substantial Adverse Effect on State or Federally Protected Wetlands (Including but Not Limited to Vernal Pool, Fresh Emergent Wetlands, Saline Emergent Wetlands, and Wet Meadows)	PS	**Implement Mitigation Measure 3.4-1: Conduct a Biological Resources Assessment** **Mitigation Measure 3.4-5: Avoid, Minimize, and Mitigate Impacts on Wetland and Other Waters** If the qualified biologist, after implementation of Mitigation Measure 3.4-1, determines that wetlands or other waters are present in the area of impact and could be adversely affected by construction activities, then the following measures will be implemented: ▶ The implementing agency will conduct a delineation of state or federally protected wetlands and submit the delineation to appropriate agencies for verification. The delineation will be conducted according to methods established in the USACE Wetlands Delineation Manual (Environmental Laboratory 1987), the Arid West Supplement (Environmental Laboratory 2008), the Western Mountains	LTS	SU

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		and Valley Supplement (Environmental Laboratory 2010), and state wetland procedures (California Water Boards 2021 or current procedures). ▶ If state or federally protected wetlands are determined to be present within a project site that can be avoided, the qualified biologist will establish a buffer around wetlands and mark the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The buffer will be a minimum width of 25 feet but may be larger if deemed necessary. The appropriate size and shape of the buffer zone will be determined in coordination with the qualified biologist and will depend on the type of wetland present (e.g., stream, vernal pool, pond), the timing of project activities (e.g., wet or dry time of year), whether any special-status species may occupy the wetland and the species' vulnerability to the project activities, environmental conditions and terrain, and the project activity being implemented. ▶ Project activities (e.g., ground disturbance, vegetation removal, staging) will be prohibited within the established buffer. The qualified biologist will periodically inspect the materials demarcating the buffer to confirm that they are intact and visible, and wetland impacts are being avoided. ▶ If any waters of the United States or waters of the state are lost or degraded by the project, these shall be replaced or restored on a no-net-loss basis in accordance with the applicable USACE and California Water Board mitigation standards in place at the time of construction.		
Impact 3.4-4: 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	PS	**Implement Mitigation Measure 3.4-1: Conduct a Biological Resources Assessment** **Mitigation Measure 3.4-6: Avoid, Minimize, and Mitigate Impacts on Wildlife Movement Corridors or Native Wildlife Nursery Sites** If the qualified biologist, after implementation of Mitigation Measure 3.4-1, determines that wildlife movement corridors or native wildlife nursery sites are present within the area of impact and could be adversely affected by construction activities, then the following measures will be implemented: ▶ Implementing agencies will design projects such that they avoid and minimize direct and indirect impacts on wildlife movement corridors and/or native wildlife nursery sites. Design considerations may include but would not be limited to the following:	LTS	SU

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		▪ constructing wildlife friendly overpasses, underpasses, bridges and/or culverts that are integrated with appropriate roadside fencing that prevents wildlife from going into the roadway and direct them towards crossing structures; ▪ using wildlife friendly fencing; ▪ limiting wildland conversions in identified wildlife corridors or native wildlife nursery sites; ▪ retaining wildlife friendly vegetation in and around developments; and ▪ avoiding the nursery or migration season for common wildlife that have important movement corridors or nursery sites in the project area during construction. ▶ For projects that cannot avoid significant impacts on wildlife movement corridors or native wildlife nursery areas, implementing agencies will consult with CDFW to determine appropriate measures to minimize direct and indirect impacts that could occur as a result of implementing the 2025 Blueprint and will implement measures to mitigate impacts on wildlife corridors or native wildlife nursery sites. ▶ For projects that require the placement of stream culverts in a fish spawning stream, the implementing agencies will consult with either USACE, NOAA Fisheries, USFWS, and CDFW, as applicable, to identify measures that will allow fish passage through the culverts. ▶ For projects in or adjacent to riparian corridors, project design will maximize distance of lighting from riparian corridors and direct light sources away from the riparian corridor. Night lighting of trails along riparian corridors should be avoided.		
Impact 3.4-5: Conflict with Local Policies or Ordinances Protecting Biological Resources, Such as a Tree Preservation Policy or Ordinance	PS	Implement Mitigation Measure 3.4-1: Conduct a Biological Resources Assessment Mitigation Measure 3.4-7: Avoid, Minimize, and Mitigate for Impacts on Protected Trees and Other Biological Resources Protected by Local Ordinances If the qualified biologist, after implementation of Mitigation Measure 3.4-1, determines that local ordinances or policies intended to protect biological resources will apply and that construction activities may result in conflicts with these ordinances or policies, then the following measures will be implemented: ▶ Implementing agencies will ensure project designs avoid and minimize direct and indirect impacts on protected trees and other locally protected biological resources where feasible, as defined in Section 15364 of the State CEQA Guidelines.	LTS	SU

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		▶ At a minimum, qualifying protected trees (or other biological resources) will be replaced at ratios included in the local general plan, local policies, or city or county codes in locally approved mitigation sites. ▶ As part of project-level environmental review, implementing agencies will ensure that projects comply with the most recent general plans, policies, and ordinances, and conservation plans.		
Impact 3.4-6: Conflict with the Provisions or an Adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan	PS	Implement Mitigation Measure 3.4-1: Conduct a Biological Resources Assessment Implement Mitigation Measure 3.4-2: Identify Special-Status Plant Species, and Avoid, Minimize, and Mitigate Impacts Implement Mitigation Measure 3.4-3: Identify Special-Status Wildlife and Avoid, Minimize, and Mitigate Impacts Implement Mitigation Measure 3.4-4: Avoid, Minimize, and Mitigate Impacts on Riparian Habitat, Sensitive Natural Communities, and Other Sensitive Habitats Implement Mitigation Measure 3.4-5: Avoid, Minimize, and Mitigate Impacts on Wetland and Other Waters	LTS	SU
Impact 3.4-7: Substantially Reduce the Habitat of a Wildlife (Including Fish) Species; Cause a Wildlife (Including Fish) Population to Drop Below Self-Sustaining Levels; Threaten to Eliminate a Plant or Wildlife Community; Or Substantially Reduce the Number or Restrict the Range of an Endangered, Threatened, or Rare Species	PS	Implement Mitigation Measure 3.4-1: Conduct a Biological Resources Assessment Implement Mitigation Measure 3.4-2: Identify Special-Status Plant Species, and Avoid, Minimize, and Mitigate Impacts Implement Mitigation Measure 3.4-3: Identify Special-Status Wildlife and Avoid, Minimize, and Mitigate Impacts Implement Mitigation Measure 3.4-4: Avoid, Minimize, and Mitigate Impacts on Riparian Habitat, Sensitive Natural Communities, and Other Sensitive Habitats Implement Mitigation Measure 3.4-5: Avoid, Minimize, and Mitigate Impacts on Wetland and Other Waters	LTS	SU
Cultural Resources				
Impact 3.5-1: Cause a Substantial Adverse Change in the Significance of a Historical Resource	PS	Mitigation Measure 3.5-1: Conduct Project-Specific Historic Built Environment Resource Studies and Identify and Implement Project-Specific Mitigation Measures that shall be implemented to address site-specific impacts, include, but are not limited to, the following: ▶ As part of the project/environmental review of individual projects, a records search at the appropriate Information Center of the CHRIS and a review of literature and historic maps shall be conducted to determine whether the project	SU	SU

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		area has been previously surveyed and whether historic built environment resources were identified. ▶ In the event the records indicate that no previous survey has been conducted within the last 5 years, a qualified architectural historian (36 CFR Section 61) shall conduct a study of the project area for the presence of historic built environment resources. The study shall include conducting a field survey, necessary background, archival and historic research, consultation with local historical societies, museums or other interested parties as relevant, and preparation of a historic resource assessment report. The report shall document the results of the survey and the historic context, evaluate the federal, state, or local significance of built environment resources greater than 45 years in age that may potentially be directly or indirectly impacted by project activities, recommend appropriate protection or mitigative treatment, if any, and include recordation of identified built environment resources on appropriate California Department of Parks and Recreation (DPR) series 523 forms. The final report and DPR forms shall be filed by the architectural historian with the CHRIS. Recommended treatment for historical built environment resources identified in the report shall be implemented. ▶ If no significant historic built environment resources are identified in the Historic Resource Assessment Report or prior survey of the project study area that may be directly or indirectly impacted by project activities, then mitigation for built environment resources is complete, and there is no adverse change to documented historical built environment resources for the project. ▶ If significant historic built environment resources are identified in the Historic Resource Assessment Report or prior survey of the project study area, the project sponsor and/or implementing agency should consider avoidance as the primary mitigation measure. If avoidance is possible, mitigation to documented historical built environment resources is complete. ▶ If avoidance of a significant built environment resource is not feasible, then the maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, or reconstruction of the historical resource, as recommended by a qualified architectural historian or historic architect (36 CFR Section 61) and conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitation, Restoring, and Reconstructing Historic Buildings or Historic		

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		Landscapes shall generally reduce impacts (Birnbaum and Peters 1996; Grimmer 2017). If adherence to the Secretary of the Interior's Standards cannot avoid materially altering in an adverse manner the physical characteristics or historic character of the surrounding environmental setting that contribute to a resource's historic significance, additional mitigation may be required. ▶ If avoidance or minimization of substantial adverse effects to a significant built environment resource is not feasible through project design or by adherence to the Secretary of the Interior's Standards, the project sponsor and/or implementing agency should ensure that Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), or Historic American Landscapes Survey (HALS) documentation is completed prior to demolishment or significant material alteration of the resource's physical characteristics or setting. The HABS, HAER, and HALS programs formally document historical resources through the use of large-format photography, measured drawings, written architectural descriptions, and historical narratives. The level of documentation required as mitigation and preparation of the HABS, HAER, or HALS shall be determined and prepared by a qualified architectural historian or historic architect (36 CFR Section 61). The documentation packages shall be archived in appropriate public and secure repositories. Such documentation would not reduce the impact to a less-than-significant level.		
Impact 3.5-2: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources	PS	**Mitigation Measure 3.5-2: Conduct Project-Specific Archaeological Resource Studies and Identify and Implement Project-Specific Mitigation** Measures that shall be implemented to address site-specific impacts, include, but are not limited to, the following: ▶ A records search at the appropriate Information Center of the CHRIS shall be conducted by a qualified archaeologist (36 CFR Section 61) as part of the appropriate project/environmental review of individual projects to determine whether the project area has been previously surveyed and whether archaeological resources were identified. ▶ In the event the records indicate that no previous survey has been conducted or the survey did not meet current professional standards or regulatory guidelines, the qualified archaeologist (36 CFR Section 61) or the Information Center shall make a recommendation on whether a survey is warranted based on the sensitivity of the project area for archaeological resources and current professional standards or regulatory guidelines.	SU	SU

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		▶ If a survey is considered warranted, the archaeological study of the project area by a qualified archaeologist shall include conducting a field survey, necessary background research, a Sacred Lands search by the NAHC and outreach to local Native Americans identified by the NAHC, consultation with local historical societies, museums or other interested parties as relevant, and an archaeological survey report. The confidential report shall document the results of the survey and the cultural context, assess the federal, state, or local significance of precontact or historic-era archaeological resources that may potentially be directly or indirectly impacted by project activities, provide appropriate management recommendations, and include recordation of identified archaeological resources on appropriate California DPR series 523 forms. Management recommendations may include additional studies to evaluate identified sites, treatment for documented historical resources, or archaeological monitoring during ground-disturbing construction activities at locations determined by the archaeologist to be sensitive for subsurface cultural resource deposits, including local Native American monitors if sensitive for precontact resources. The final confidential report and DPR forms would be filed by the archaeologist with the CHRIS. Recommended treatment for resources identified in the report should be implemented. ▶ If no archeological resources are identified in the Archeological Survey Report that may be directly or indirectly impacted by project activities, mitigation is complete as there would be no adverse change to documented archeological resources. ▶ When a project would impact a known archaeological site, the project sponsor and/or implementing agency shall determine whether the site is a historical resource or an archaeological nature (State CEQA Guidelines Section 15064.5(c)(1)) or unique archaeological resource (PRC Section 21083.2(g)). If archaeological sites identified in the project area are considered potentially significant, the project sponsor and/or responsible implementing agency shall undertake additional studies overseen by a qualified archaeologist (36 CFR Section 61) to evaluate the resources eligibility for listing in the CRHR, NRHP, local register, or as a unique archaeological resource and to recommend further mitigative treatment. Evaluations shall be based on, but not limited to, surface remains, subsurface testing, or archival and ethnographic resources, on the framework of the historic context and important research questions of the project area, and on the integrity of the resource. If a site to be tested is precontact, local		

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		tribal representatives should be afforded the opportunity to monitor the ground-disturbing activities. Appropriate mitigation may include curation of artifacts removed during subsurface testing. ▶ If significant archaeological resources that meet the definition of historical resources of an archaeological nature or unique archaeological resources are identified in the project area, the preferred mitigation of impacts is preservation in place (State CEQA Guidelines Section 15126.4(b); PRC Section 21083.2). Preservation in place may be accomplished by, but is not limited to, avoidance by project design, incorporation within parks, open space or conservation easements, covering with a layer of sterile soil, or similar measures. If preservation in place is feasible, mitigation is complete. Additionally, where the implementing agency determines that an alternative mitigation method is superior to in-place preservation, the project sponsor and/or implementing agency may implement such alternative measures. ▶ When preservation in place or avoidance of historical resources of an archaeological nature or unique archaeological resources are infeasible, data recovery through excavation shall be required (State CEQA Guidelines Section 15126.4(b)). Data recovery would consist of approval of a Data Recovery Plan and archaeological excavation of an adequate sample of site contents so that research questions applicable to the site can be addressed. For precontact sites, local tribal representatives should be afforded the opportunity to monitor the ground-disturbing activities. If only part of a site would be impacted by a project, data recovery shall only be necessary for that portion of the site. Data recovery shall not be required if the implementing agency determines prior testing and studies have adequately recovered the scientifically consequential information from the resources. Confidential studies and reports resulting from the data recovery shall be deposited with the appropriate CHRIS 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. Mitigation may include curation for artifacts removed during data recovery excavation. ▶ If archaeological sites are discovered during construction, all work near the find shall be halted and the project sponsor and/or implementing agency shall follow the steps described under State CEQA Guidelines Section 15064.5(f), including an immediate evaluation of the find by a qualified archaeologist (36 CFR Section 61) and implementation of avoidance measures or appropriate mitigation if the find		

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		is determined to be a historical resource of an archaeological nature or unique archaeological resource. Consultation with or affording local tribal representatives the opportunity to monitor mitigative treatment may be appropriate. Should the find include human remains, the remains shall be treated in accordance with the provisions of Section 7050.5 of the Health and Safety Code. During evaluation or mitigative treatment, ground disturbance and construction work could continue on other parts of the project area. **Mitigation Measure 3.5-3: Reduce Visibility or Accessibility of Archaeological Resources** The project sponsor and/or implementing agency shall determine whether or not implementation of a project would indirectly impact historical or unique archaeological resources by increasing public visibility and ease of access. If so, the project sponsor and/or implementing agency shall take measures to reduce the visibility or accessibility of the archaeological resource to the public. Visibility of the resource can be reduced through the use of decorative walls or vegetation screening. Accessibility can be reduced by installing fencing or vegetation barriers, particularly noxious vegetation such as poison oak or blackberry bushes. It is important to avoid creating an attractive nuisance when protecting significant archaeological sites. Conspicuous walls or signs indicating that an area is restricted may result in more attempts to access the excluded area.		
Impact 3.5-3: Disturb any Human Remains, including those Interred Outside of Dedicated Cemeteries	LTS	No mitigation is required for this impact.	LTS	LTS
Geology, Soils, and Paleontological Resources				
Impact 3.6-1: Directly or Indirectly Expose People or Structures to Potential Substantial Adverse Impacts, Including the Risk of Loss, Injury, or Death Through the Rupture of a Known Earthquake Fault, Strong Seismic Shaking, Seismic-Related Ground Failure, Soil Liquefaction, or Landslides	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.6-2: Result in Substantial Soil Erosion or the Loss of Topsoil	LTS	No mitigation is required for this impact.	LTS	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
Impact 3.6-3: Be Located on Expansive Soil, Creating Substantial Direct or Indirect Risks to Life and Property or 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 On- or Off-Site Landslide, Lateral Spreading, Liquefaction, or Collapse	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.6-4: Locate Project Facilities on Expansive Soil, Creating Substantial Direct or Indirect Risks to Property	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.6-5: Have Soils Incapable of Adequately Supporting the Use of Septic Tanks or Alternative Wastewater Disposal Systems Where Sewers Are Not Available for the Disposal of Wastewater	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.6-6: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature	PS	**Mitigation Measure 3.6-1: Site-Specific Paleontological Resources Inventory Assessment and Construction Monitoring by a Paleontologist** Prior to initiating any construction in bedrock, a qualified professional paleontologist shall prepare a paleontological resources inventory and assessment for any affected rock units. This report shall include the following components: ▶ A report of any fossils observed during a reconnaissance-level field survey. ▶ The results of a records search of appropriate paleontological databases (at a minimum, the database at the University of California, Berkeley Museum of Paleontology) to determine whether any previously recorded fossil localities are located within or immediately adjacent to the area where rock boring is proposed. ▶ A determination as to whether the geologic formations are of high or low paleontological sensitivity, and a discussion supporting the reasons why the sensitivity determinations were made. If the rock formation is determined to be of high paleontological sensitivity, a paleontological monitor will be present during construction to monitor potential impacts on paleontological resources. If resources are identified during construction, work will stop within 100 feet of the resource until the resource can be evaluated and the recommendations of the paleontologist followed. Prior to issuance of grading permits that would allow for boring in bedrock, the approving local jurisdiction will review the report and findings to confirm no paleontological resources would be affected.	LTS	SU

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Greenhouse Gas Emissions and Energy				
Impact 3.7-1: Conflict with the SB 375 GHG Emissions Reduction Targets	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.7-2: Be Inconsistent with the State's Ability to Achieve the 2030 Reduction Target of SB 32 and Carbon Neutrality by 2045, Consistent with AB 1279	S	Implement Mitigation Measure 3.16-1: Implement VMT Reduction Strategies Mitigation Measure 3.7-1: Coordinate with and Support Local Agencies within the Plan Area to Reduce Regional GHGs from All Sectors SACOG, in partnership with air districts within the plan area, shall work with the counties and cities within the plan area to adopt qualified GHG reduction plans (e.g., CAPs), develop GHG-reducing planning policies, and implement local climate initiatives, with the ultimate completion date to be achieved by the MTP/SCS's horizon year. These reductions can be achieved through a combination of programs, including zero net energy in new construction, retrofits of existing buildings, incentivizing the development of renewable energy sources that serve both new and existing land uses, and other measures. Notably, the development and implementation of GHG reduction plans would ultimately occur at the discretion of local agencies, counties, and municipalities. Nevertheless, SACOG shall contribute relevant data and protocols to assist in the development of inventories, forecasts, and GHG reduction strategies.	SU	SU
Impact 3.7-3: Substantially Interfere with Achievement of Applicable Local GHG Reduction Plan Goals or Conflict with or Obstruct a Plan for Renewable Energy or Energy Efficiency	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.7-4: Increase GHG Emissions from Project Construction Activities Resulting from the 2025 Blueprint in a Manner Inconsistent with Achievement of the State's Climate Goals	S	Mitigation Measure 3.7-2: Implement All Feasible On- and Off-Site Mitigation Measures to Reduce GHG Emissions Below a Lead Agency–Approved Threshold of Significance The applicable lead agency can and should implement, where necessary and feasible to address site-specific construction climate change impacts, the following measures to reduce construction GHG emissions below applicable air district thresholds, where they exist: ▶ Project proponents shall require its contractors to restrict the idling of on- and off-road diesel equipment to no more than 5 minutes while the equipment is on-site in compliance with California's Regulation for In-Use-Offroad Diesel Fueled Fleets.	SU	SU

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		▶ Project proponents of new facilities shall implement waste, disposal, and recycling strategies (i.e., 10 percent recycled content for Tier 1 and 15 percent recycled content for Tier 2) in accordance with the voluntary measures for non-residential land uses contained in Section A5.405.4 of the 2022 CALGreen Code or in accordance with any update to these requirements in future iterations of the CALGreen Code in place at the time of project construction. ▶ Project proponents of new facilities shall achieve or exceed the enhanced Tier 2 target for nonresidential land uses of recycling or reusing 80 percent of the construction waste as described in Section A5.408 of the 2022 CALGreen Code or in accordance with any update to these requirements in future iterations of the CALGreen Code in place at the time of project construction. ▶ Project proponents shall require that all diesel-powered, off-road construction equipment meet EPA's Tier 3 or Tier 4 emissions standards as defined in 40 CFR 1039 and comply with the exhaust emission test procedures and provisions of 40 CFR Parts 1065 and 1068. This measure can also be achieved by using battery-electric off-road equipment as it becomes available. ▶ Project proponents shall implement a program that incentivizes construction workers to carpool, and/or use public transit or electric vehicles to commute to and from the project site.		
Impact 3.7-5: Result in Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources	LTS	No mitigation is required for this impact.	LTS	LTS
Hazards and Hazardous Materials				
Impact 3.8-1: Create a Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.8-2: Create a Significant Hazard to People or the Environment from the Use or Accidental Release or Upset of Hazardous Materials	PS	**Mitigation Measure 3.8-1: Conduct Site-Specific Investigation to Characterize the Potential Presence of Hazardous Waste** The project proponent shall perform a records review to determine whether there is existing, permitted use of hazardous materials or documented evidence of hazardous waste contamination on the project site and provide the results of this investigation to the implementing agency. For any sites that are not listed and do not have the potential for residual hazardous materials as a result of historic land uses, no action is required unless unknown	LTS	SU

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		hazards are discovered during development. In that case, the implementing agency shall discontinue development until DTSC, RWQCB, local air district, and/or other responsible agency issues a determination. For any listed sites or sites that have the potential for residual hazardous materials as a result of historic land uses, project proponents shall prepare a Phase I ESA that meets ASTM standards. If a Phase 1 ESA prepared for a project contains recommendations, those shall be implemented for the project. If a Phase I ESA indicates the presence or likely presence of contamination, the project proponent shall prepare a Phase II ESA. Based on the Phase II ESA recommendations, the project shall implement and meet the standard remediation set forth in the Phase II ESA.		
Impact 3.8-3: Emit or Handle Hazardous Materials, Substances, or Waste Within 0.25 Mile of an Existing or Proposed School	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.8-4: Result in Development on a Site Which is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5 and, as a Result, Create a Significant Hazard to the Public or Environment	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.8-5: Result in a Safety Hazard or Excessive Noise for People Residing or Working in the Plan Area due to a Project Located near a Public Airport or Public Use Airport	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.8-6: Impair Implementation of, or Physically Interfere with, an Adopted Emergency Response Plan or Emergency Evacuation Plan	LTS	No mitigation is required for this impact.	LTS	LTS
Hydrology and Water Quality				
Impact 3.9-1: Violate Any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Groundwater Quality	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.9-2: Substantially Decrease Groundwater Supplies or Interfere with Groundwater Recharge such that the Project May Impede Sustainable Groundwater Management of the Basin	LTS	No mitigation is required for this impact.	LTS	LTS

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Impact 3.9-3: Substantially Alter the Existing Drainage Pattern such that Erosion, Siltation, Runoff, Flooding, or an Exceedance of the Capacity of Storm Drainage Systems Would Occur	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.9-4: In Flood Hazard or Seiche Zones, Risk Release of Pollutants Due to Project Inundation	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.9-5: Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan	LTS	No mitigation is required for this impact.	LTS	LTS
Land Use and Planning				
Impact 3.10-1: Physically Divide an Existing Community	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.10-2: Cause a Significant Environmental Impact due to Conflict with the SCS Requirements of SB 375	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.10-3: Cause a Significant Environmental Impact due to Conflict with the Provisions of the Delta Plan or the LURMP	LTS	No mitigation is required for this impact.	LTS	LTS
Mineral Resources				
Impact 3.11-1: 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 or 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	LTS	No mitigation is required for this impact.	LTS	LTS
Noise and Vibration				
Impact 3.12-1: Result in Temporary Noise Levels in the Vicinity of the Project that Exceed FTA Recommended Standards or Generate a Substantial Temporary Increase in Ambient Noise Levels	S	**Mitigation Measure 3.12-1: Employ Measures to Reduce Construction Noise** To reduce construction noise levels and to achieve compliance with the applicable construction noise standards of the relevant jurisdiction within the plan area, implementing agencies shall implement measures, where applicable and necessary based on project- and site-specific considerations, that include those (or equally effective measures) identified below:	SU	SU

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		▶ Comply with local construction-related noise standards, including restricting construction activities to permitted hours as defined under local jurisdiction regulations, unless otherwise necessary. ▶ Notify residents and occupants within 252 feet of the project construction area at least 30 days in advance of anticipated times when construction noise levels are anticipated to exceed evening or nighttime noise limits established in the noise element of the general plan or noise ordinance. ▶ Designate an on-site construction compliance and enforcement manager for the project. ▶ Post procedures and phone numbers at the construction site for notifying the implementing agency staff and construction contractor (during regular construction hours and off-hours), along with permitted construction days and hours, complaint procedures, and who to notify in the event of a problem. ▶ All stationary construction equipment (e.g., generators, compressors, cement mixers) and staging areas shall be located as far as possible from nearby noise-sensitive land uses, and/or located to the extent feasible such that an existing or constructed noise attenuating feature (e.g., temporary noise wall or blanket) block the line-of-site between affected noise-sensitive land uses and construction staging areas. ▶ Prohibit the idling of construction equipment for extended periods of time in the vicinity of sensitive receptors. ▶ All construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer recommendations. Equipment engine shrouds shall be closed during equipment operation. ▶ For construction activity that would occur within a clear line-of-sight of an adjacent offsite sensitive receptor (as defined by the local jurisdiction), take place outside of hours during which construction activity is exempt from local noise standards, and exceed applicable construction noise standards or thresholds, the construction contractor shall install temporary sound barriers to attenuate noise, such as temporary noise curtains, sound walls, or similar products that provide a barrier to construction noise. The temporary sound barrier shall be located between the project construction noise sources and receptors to shield the receptors from construction noise. When installed properly, acoustic barriers can		

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		reduce construction noise levels by approximately 8-10 dB (EPA 1971). The installation of any temporary sound barrier shall meet all the following criteria: • be installed as close as feasible to the boundary of the construction site within the direct line of sight path of the nearby sensitive receptor(s); • consist of durable, flexible composite material featuring a noise barrier layer bound to sound-absorptive material on one side; and • consist of rugged, impervious material with a surface weight of at least one pound per square foot, such that a minimum of 10 dBA reduction is achieved on the receiving side of the sound barrier.		
Impact 3.12-2: Result in Traffic Noise Levels that Exceed the Community Type Thresholds Identified in Table 3.12-5 or Permanent Stationary Noise Levels in the Vicinity of the Project in Excess of Standards Established in the Local General Plan or Noise Ordinance, or Applicable Standards of Other Agencies	S	Mitigation Measure 3.12-2: Employ Measures to Reduce Traffic Noise For projects that have not undergone a previous noise study and that exceed applicable noise thresholds, the implementing agency shall require a project-level evaluation of noise impacts in accordance with applicable federal, State, and local noise standards. To reduce exposure from traffic noise when significant impacts are identified, implementing agencies and/or project sponsors shall implement measures, where feasible and necessary based on project- and site-specific considerations to achieve noise levels in accordance with applicable local noise standards. Measures shall include those identified below (or other equally effective measures): ▶ Design adjustments to proposed roadway or transit alignments to reduce noise levels in noise-sensitive areas (e.g., below-grade roadway alignments can effectively reduce noise levels in nearby areas by providing a barrier between the source and receptor). ▶ Use traffic-calming measures in the design of transportation improvements. ▶ Use rubberized asphalt or "quiet pavement" to reduce road noise for new roadway segments, roadways in which widening or other modifications require re-pavement, or normal reconstruction of roadways where re-pavement is planned. ▶ Maximize the distance between existing noise-sensitive land uses and new noise-generating facilities and transportation systems. ▶ Construct barriers in the form of outdoor barriers, sound walls, buildings, or earth berms to attenuate noise at adjacent sensitive uses if in compliance with local ordinances or policies.	LTS	SU

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		▶ Monitor the effectiveness of noise reduction measures by taking noise measurements and installing adaptive mitigation measures to achieve the standards for ambient noise levels established by the noise element of the general plan or noise ordinance. **Mitigation Measure 3.12-3: Employ Measures to Reduce Stationary Noise from New Land Use Projects** To reduce the exposure of existing sensitive receptors to non-transportation noise associated with projected development, implementing agencies and/or project sponsors shall require, for projects with features that generate stationary noise that are near sensitive receptors, a project-level evaluation of noise impacts in accordance with applicable federal, state, and local noise standards. Where significant impacts are identified, applicable mitigation measures shall be implemented to reduce noise to achieve noise levels in accordance with applicable local noise standards. Where feasible and necessary to address site-specific impacts, measures shall be implemented and shall include, but are not limited to, the following: ▶ maximize the distance between noise-sensitive land uses and new noise-generating facilities; ▶ improve the acoustical insulation, window quality, and/or other soundproofing of dwelling units (existing or proposed) where setbacks do not sufficiently reduce noise; and ▶ incorporate noise-reduction features to reduce the average hourly exterior operational noise levels of mechanical equipment at nearby noise-sensitive land uses in compliance with local standards. Noise-reduction measures to be incorporated may include, but are not limited to, setbacks, the selection of alternative or lower noise-generating equipment, relocation of equipment, and use of equipment enclosures. **Mitigation Measure 3.12-4: Reduce Exposure of New Sensitive Receptors to Transportation and Stationary Noise** To prevent future noise sensitive receptors from exposure to excessive noise levels, prior to project approval, project proponents of a sensitive land use shall provide the local jurisdiction with a site-specific noise assessment prepared by a qualified acoustical professional that addresses interior and exterior noise levels at the proposed sensitive land use. The noise assessment shall consider existing noise sources adjacent to the proposed residential structure. If the proposed structure is		

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		located within an area with noise levels that exceed applicable noise thresholds for residential land uses, the noise assessment shall confirm, using approved calculation methodologies, that site design and building design are sufficient to comply with applicable interior noise standards. If the assessment shows that such standards would not be met with the design as proposed, the project proponent shall implement recommendations of the assessment that are shown to achieve applicable standards.		
Impact 3.12-3: Generate Excessive Groundborne Vibration or Groundborne Noise Levels	S	**Mitigation Measure 3.12-5: Employ Measures to Reduce Construction Vibration** To reduce construction vibration levels to acceptable levels (i.e., 65 VdB to 80 VdB depending on frequency of event and 0.1 to 0.5 in/sec PPV depending on building type), implementing agencies and/or project sponsors shall implement measures, where feasible and necessary based on project- and site-specific considerations, that include those identified below: ▶ To minimize disturbance of sensitive receptors (as defined within a local ordinance or general plan) within 545 feet of impact pile-driving activities, implement "quiet" pile-driving technology (such as predrilling of piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions. ▶ To reduce structural damage, where pile driving is proposed within 48 feet of an existing historical structure, engage a qualified geotechnical engineer and qualified historic preservation professional (for designated historic buildings only) and/or structural engineer to conduct a preconstruction assessment of existing subsurface conditions and the structural integrity of nearby (i.e., within 48 feet) structures that would be exposed to pile-driving activity. If recommended by the preconstruction assessment, for structures or facilities within the impact distance (e.g., 48 feet) of pile-driving activities, the project sponsor shall require ground vibration monitoring of nearby reinforced-concrete, steel, or timber structures. Such methods and technologies shall be based on the specific conditions at the construction site. Conditions will be determined through activities such as the preconstruction surveying of potentially affected historic structures and underpinning of foundations of potentially affected structures, as necessary. The preconstruction assessment shall include a monitoring program to detect ground settlement or lateral movement of structures in the vicinity of pile-driving activities and identify corrective measures to be taken should monitored vibration levels	LTS	SU

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		indicate the potential for building damage. In the event of unacceptable ground movement with the potential to cause structural damage, all impact work shall cease, and corrective measures shall be implemented to minimize the risk to the subject, or adjacent, historic structure. ▶ Restrict construction activities to permitted hours in accordance with local jurisdiction regulations. **Mitigation Measure 3.12-6: Implement Measures to Reduce Operational Vibration from New and Expanded Rail Systems** Project proponents proposing new or expanded rail systems shall undertake a detailed evaluation of vibration and groundborne noise impacts and identify project-specific mitigation measures as necessary to reduce vibration to a level that complies with applicable local standards or FTA standards. To address site-specific conditions to minimize the effects of vibration and groundborne noise from rail operations, the following measures shall be implemented where feasible and necessary: ▶ complying with all applicable local vibration and groundborne noise standards, or in the absence of such local standards, comply with FTA vibration and groundborne noise standards; ▶ maximizing the distance between tracks and sensitive uses; ▶ conducting wheel truing to re-contour wheels to provide a smooth-running surface and removing wheel flats; ▶ providing special track support systems such as floating slabs, resiliently supported ties, high resilience fasteners, and ballast mats; and ▶ implementing operational changes such as limiting train speed and reducing nighttime operations.		
Population, Employment, and Housing				
Impact 3.13-1: Induce Substantial Unplanned Population Growth in an Area, either Directly or Indirectly; and/or Displace Substantial Numbers of Existing People or Housing, Necessitating the Construction of Replacement Housing Elsewhere	LTS	No mitigation is required for this impact.	LTS	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
Public Services				
Impact 3.14-1: Result in Substantial Adverse Physical Environmental Impacts Associated with the Provision of New or Physically Altered Governmental Facilities in order to Maintain Acceptable Service Ratios, Response Times or Other Performance Objectives for Fire Protection, Police Protection, Schools, Libraries, Social Services, and/or Other Public Services	PS	**Mitigation Measure 3.14-1: Require Provision of Adequate Public Services** During project planning, design, and project-level environmental review, implementing agencies shall ensure that adequate public services are available. This shall be documented prior to project approval in the form of a capacity analysis approved by the various applicable districts.	SU	SU
Recreation				
Impact 3.15-1: Increase the Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities such that Substantial Physical Deterioration of the Facility Could Occur or be Accelerated	PS	**Mitigation Measure 3.15-1: Require Provision of Adequate Park Facilities** During project planning, design, and project-level environmental review, implementing agencies shall ensure that adequate park services are achieved. This shall be documented prior to project approval in the form of a capacity analysis approved by the applicable parks district.	SU	SU
Impact 3.15-2: Include Recreation Facilities or Require the Construction or Expansion of Recreation Facilities that might have an Adverse Physical Effect on the Environment	LTS	No mitigation is required for this impact.	LTS	LTS
Transportation				
Impact 3.16-1: Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, including Transit, Roadway, Bicycle, and Pedestrian Facilities	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.16-2: Result in a Change in per Capita VMT that is Inconsistent with CARB's 2022 Scoping Plan	PS	**Mitigation Measure 3.16-1: Implement VMT Reduction Strategies** The State recognized that additional State policy actions and funding would be required to close the VMT gap between what the MPOs could achieve through implementation of their SCSs and reductions needed to meet State goals (CARB 2022c). Though the State must initiate these additional actions and funding programs, the exact form of the policies and funding programs must be collaboratively developed with input from MPOs, local agencies, and other organizations to ensure they provide the tools and incentives necessary to go beyond the SCSs in reducing VMT. SACOG shall be an active participant in this process to develop and explore pathways to implement State-level VMT reduction strategies, such as those outlined in Appendix C (2022 Scoping Plan) through a	SU	SU

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		transparent and inclusive interagency policy development process to evaluate and identify implementation pathways for additional policies to reduce VMT and promote sustainable communities. SACOG developed the "Green Means Go" program as part of the 2020 MTP/SCS, which SACOG shall continue to implement this pilot for some of the infill incentives and support for transit and innovative mobility that are envisioned in the 2022 Scoping Plan as key elements of filling that VMT gap. In addition, implementing agencies shall comply with State guidance on VMT reduction, which may be achieved by implementation of the following: ▶ Implementing agencies shall require project modifications during the project design and environmental review stage of project development that would reduce VMT effects in a manner consistent with state guidance on VMT reduction. For roadway capacity expansion projects, this would include but is not limited to demand management through transportation systems management and operations (TSMO) including the use of pricing. Other project modifications may include, but are not limited to: ▪ improve or increase access to transit; ▪ increase access to common goods and services, such as groceries, schools, and daycare; ▪ incorporate affordable housing into the project; ▪ incorporate neighborhood electric vehicle network; ▪ orient the project toward transit, bicycle, and pedestrian facilities; ▪ improve pedestrian or bicycle networks, or transit service; ▪ provide traffic calming; ▪ provide bicycle parking; ▪ limit or eliminate parking supply; ▪ unbundle parking costs; ▪ provide parking cash-out programs; ▪ implement roadway pricing; ▪ implement or provide access to a commute reduction program; ▪ provide car-sharing, bike sharing, and ride-sharing programs; ▪ provide transit passes;		

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		▪ shift single occupancy vehicle trips to carpooling or vanpooling, for example providing ride-matching services; ▪ provide telework options; ▪ provide incentives or subsidies that increase the use of modes other than single-occupancy vehicles; ▪ provide on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms; ▪ provide employee transportation coordinators at employment sites; ▪ provide a guaranteed ride home service to users of non-auto modes; ▪ locate the project in an area of the region that already exhibits low VMT; ▪ locate the project near transit; ▪ increase project density; ▪ increase the mix of uses within the project or within the project's surroundings; ▪ increase connectivity and/or intersection density on the project site; and/or ▪ deploy management strategies (e.g., pricing, vehicle occupancy requirements) on roadways or roadway lanes. ▶ Implementing agencies shall require implementation of VMT reduction strategies through transportation demand management programs, impact fee programs, mitigation banks or exchange programs, in-lieu fee programs, or other land use project conditions that reduce VMT in a manner consistent with state guidance on VMT reduction. Programs should be designed to reduce VMT from existing land uses, where feasible, and from new discretionary residential or employment land use projects. Project conditions should be reserved for situations where programs are not feasible. The design of programs and project conditions should focus on VMT reduction strategies that increase travel choices and improve the comfort and convenience of sharing rides in private vehicles, using public transit, riding bicycles/scooters, or walking.		
Impact 3.16-3: Substantially Increase Hazards due to a Geometric Design Feature or Incompatible Uses	LTS	No mitigation is required for this impact.	LTS	LTS
Impact 3.16-4: Result in Inadequate Emergency Access	LTS	No mitigation is required for this impact.	LTS	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
Tribal Cultural Resources				
Impact 3.16-1: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource	S	**Mitigation Measure 3.17-1: Prepare and Implement a Worker Awareness Training Program for Tribal Cultural Resources** Prior to project-specific ground-disturbing activities, a tribal cultural resources awareness training program will be provided to all construction personnel active on the project site. A representative or representatives from culturally affiliated Native American Tribe(s) will be invited to participate in the development and delivery of the training program in coordination with a professional archaeologist meeting the United States Secretary of Interior's qualification standards for archaeology. The program will include relevant information regarding tribal cultural resources, including applicable laws and regulations, the consequences of violating said laws and regulations, protocols for resource avoidance, and protocols for discoveries, including who to contact in the event of a discovery and what to do upon the discovery of human remains. The program will also underscore the requirement for confidentiality and culturally appropriate treatment of any find of significance to Native Americans and protocols, consistent with Native American Tribal values. **Mitigation Measure 3.17-2: Halt Ground Disturbance Upon Discovery of Subsurface Tribal Cultural Resources and Evaluate Discovered Resources** During subsequent project-specific ground disturbing construction activities, if any suspected tribal cultural resources are discovered, all work shall cease within 100 feet of the find, and a tribal monitor from culturally affiliated Native American Tribe(s) shall be retained, if one is not currently on site. The tribal monitor shall determine if the find is a tribal cultural resource. The consulting THPO, or tribal monitor if the consulting tribe has no THPO, will make recommendations for further evaluation and culturally appropriate treatment of discovered Tribal cultural resources as necessary. Consultation with an archaeologist who meets the secretary of the Interior's professional qualifications for archaeology may also occur. Treatment and Documentation: The culturally affiliated Tribe shall consult with the Lead Agency to (1) identify the boundaries of the new tribal cultural resource and (2) if feasible, identify appropriate preservation in place and avoidance measures, including redesign or adjustments to the existing construction process, and long-term management, or 3) if avoidance is infeasible, a reburial location in proximity of the find where no future disturbance is	SU	SU

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		anticipated. Permanent curation of tribal cultural resources will not take place unless approved in writing by the culturally affiliated Tribe. The construction contractor(s) shall provide secure, on-site storage for culturally sensitive soils or objects that are components of tribal cultural resources that are found or recovered during construction. Only Tribal Representatives shall have access to the storage. Storage size shall be determined by the nature of the TCR and can range from a small lock box to a conex box (shipping container). A secure (locked), fenced area can also provide adequate on-site storage if larger amounts of material must be stored. The construction contractor(s) and Lead Agency shall facilitate the respectful reburial of the culturally sensitive soils or objects. This includes providing a reburial location that is consistent with the Tribe's preferences, excavation of the reburial location, and assisting with the reburial, upon request. Any discoveries shall be documented on a Department of Parks and Recreation (DPR) 523 form within 4 weeks of the discovery and submitted to the appropriate CHRIS center in a timely manner. If articulated or disarticulated human remains, or human remains in any state of decomposition or skeletal completeness are discovered during construction activities, the County Coroner and the culturally affiliated Tribe shall be contacted immediately. Upon determination by the County Coroner that the find is Native American in origin, the Native American Heritage Commission will assign the Most Likely Descendent who will work with the project proponent to define appropriate treatment and disposition of the burials. Work at the discovery location cannot resume until all necessary investigation, evaluation, and treatment of the discovery under the requirements of the CEQA, specifically PRC Section 21084.3[b], have been satisfied. **Implement Mitigation Measure 3.17-3: Reduce Visibility or Accessibility of Tribal Cultural Resources** The culturally affiliated Tribe shall consult with the Lead Agency to determine whether or not implementation of a project would indirectly impact tribal cultural resources by increasing public visibility and ease of access. If so, the project sponsor and/or implementing agency shall take measures to reduce the visibility or accessibility of the tribal cultural resource to the public. Visibility of the resource can be reduced through the use of decorative walls or vegetation screening. Accessibility can be reduced by installing fencing or vegetation barriers, particularly noxious		

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		vegetation such as poison oak or blackberry bushes. It is important to avoid creating an attractive nuisance when protecting significant sites. Conspicuous walls or signs indicating that an area is restricted may result in more attempts to access the excluded area.		
Utilities and Service Systems				
Impact 3.18-1: Have Insufficient Water Supplies Available to Serve the Project and Reasonably Foreseeable Future Development During Normal, Dry and Multiple Dry Years	PS	**Mitigation Measure 3.18-1: Implement Water Conservation Measures** The implementing agency shall implement measures regarding water conservation, efficiency, capture, and reuse identified by water suppliers in state, regional, and local plans, laws, and policies, and in their own plans and ordinances during planning, design, and project-level environment review, construction, operations, and maintenance activities. Measures include, but are not limited to, the following: ▶ Install drip or other water-conserving or weather-based irrigation systems for landscaping. ▶ Coordinate with the relevant water service provider to ensure that the provider has adequate water supplies to accommodate the increase in demand. If the water service provider servicing the project site is found to have inadequate water supplies, improvements and or mitigation measures shall be identified in each project's CEQA documentation. ▶ Design future projects to reduce the use of potable water for landscape irrigation (xeriscaping). These design components could include drought-tolerant plantings for landscaping, water-efficient irrigation systems, the capture and use of rainwater ▶ Design future projects to reduce the use of potable water through the use of water-conserving fixtures such as dual-flush toilets, waterless urinals, reduced flow faucets, and EnergyStar rated appliances. ▶ For projects located in an area with existing reclaimed water conveyance infrastructure and excess reclaimed water capacity, these future projects shall use reclaimed water for non-potable uses, such as landscape irrigation, ornamental water features, concrete mixing, and dust control. For projects in a location planned for future reclaimed water service, projects should install dual plumbing systems in anticipation of future use. ▶ Adopt Tier 1 or Tier 2 Cal Green standards as mandatory local requirements.	SU	SU

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
Impact 3.18-2: Require or Result in the Relocation or Construction of New or Expanded Water, Wastewater, Treatment or Storm Water Drainage, Electric Power, Natural Gas, or Telecommunications Facilities, the Construction or Relocation of Which Could Cause Significant Environmental Effects	PS	**Mitigation Measure 3.18-2: Require Provision of Adequate Utility Service** During project planning and environmental review, implementing agencies shall provision of ensure provision of adequate utilities including water, wastewater, stormwater drainage, and electricity service. This shall be documented prior to project approval in the form of a capacity analysis approved by the applicable parks district. No feasible mitigation measure exists to .	SU	SU
Impact 3.18-3: Generate Solid Waste in Excess of State or Local Standards or in Excess of the Capacity of Local Infrastructure, or Otherwise Impair Attainment of Solid Waste Reduction Goals; or Fail to Comply with Federal, State, and Local Management Reduction Statutes and Regulations Related to Solid Waste	LTS	No mitigation is required for this impact.	LTS	LTS
Wildfire				
Impact 3.19-1: Expose, or Exacerbate Existing Significant Exposure of, People or Structures to: Significant Risk of Loss, Injury, or Death Involving Wildland Fires; Pollutant Concentrations from a Wildfire; or Significant Risk of Downslope or Downstream Flooding or Landslides as a Result of Post-fire Slope Instability	PS	**Mitigation Measure 3.19-1: Complete a Fire Safe Plan for Land Use Projects Located in Local Responsibility Area and State Responsibility Area Very High Fire Hazard Severity Zones** Individual project applicants shall work with the municipal or regional fire marshal and the CAL FIRE Battalion Chief to produce and implement a fire safe plan (FSP) for land use projects that are located within a VHFHSZ of an LRA or an SRA. Depending on the specific environmental conditions of each project site, the FSP shall include a number of strategies, including but not limited to: ▪ Externally or internally illuminating street signs and address numbers on residential buildings for clearer visibility; ▪ Fencing materials adjacent to non-irrigated open space areas shall be constructed of non-combustible materials; ▪ Combustible sheds and other outbuildings shall be kept at least 30 feet from residential units and other buildings on each parcel; ▪ Alternative materials and construction methods exceeding the minimum criteria described in CBC Chapter 7A shall be implemented for individual land use projects located within SRA and LRA VHFHSZs to meet the "Practical Effect" principles described in CCR Title 14 – Section 1276.01 (when buildings are located within 30-feet of property lines) and reduce the potential for building-to-building fire spread. Specific requirements may include:	SU	SU

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		▪ Block any spaces between roof decking and the Class A roof covering to prevent embers from catching and igniting the building. ▪ Eaves shall be enclosed on the underside with non-combustible material, ignition-resistant material, or minimum 2-inch lumber. ▪ Exterior walls shall be constructed with non-combustible building materials such as stucco, fiber cement, stone or brick, and comply with CCR Title 24, Part 2, Chapter 7A, Section 707A. ▪ Use WUI ember and flame-resistant vents, conforming with the requirements described in ASTM E2886, to protect exterior wall openings when the wall is located within 30-feet of another building. Dryer vents shall be metal and equipped with a louver or flap. ▪ Exterior windows, skylights, glazed doors, and glazed openings within exterior doors shall be multi-paned with at least two tempered panes, minimum 20 minute fire rated, or fire-resistant glass block units, and shutters installed over windows shall be non-combustible. ▪ Areas located under first floor bay windows shall be enclosed with non-combustible walls. ▪ Exterior doors of buildings shall be non-combustible, or have a non-combustible exterior storm door, and comply with CCR Title 24, Part 2, Chapter 7A, Section 708A. ▪ A minimum non-combustible area of 6 vertical inches, measured from the ground up (at grade) and from any attached horizontal surface like a deck, shall be provided on the exterior of all buildings. Non-combustible materials can include brick, stone, fiber-cement siding, or concrete. ▪ Fencing materials located within 5 feet of a building shall be constructed of non-combustible materials. Areas located between 0 feet and 5 feet from all buildings shall remain non-combustible. Back-to-back, combustible fencing shall be separated by a minimum of 5 feet. ▪ Landscape materials and other vegetation located within 0 to 100 feet of dwellings shall comply with the fire-resistant standards of CAL FIRE. ▪ Accessory and miscellaneous structures, as defined in the CBC, located within the reduced fire setback zone shall comply with this plan and CCR Title 24, Part 2, Chapter 7A, Section 710A.		

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		▪ Decks, including posts, joists, railing, stairs, and walking surfaces, shall be non-combustible and comply with CCR Title 24, Part 2, Chapter 7A, Section 709A. ▪ Projections shall be non-combustible, ignition resistant, or 1 hour fire-rated in accordance with International WUI Code, Section 503.2, and/or National Fire Protection Association 1144 Standard for Reducing Structure Ignition Hazards, Section 5.2. ▪ Gutters and downspouts shall be non-combustible material. Gutters shall be provided with a non-combustible leaf guard. ▶ A Restrictive Covenant shall be filed with the final subdivision map which stipulates that a Fire Safe Plan has been prepared and wildfire mitigation measures shall be implemented. ▶ A 5-foot defensible space ember-resistant zone (Zone 0) shall be maintained around all buildings (including fencing within 5 feet). ▶ For residential units that include a Homeowners' Association (HOA), or other acceptable entity, the HOA or other acceptable entity shall be responsible for maintaining all private emergency vehicle access roads and wildfire fuel reduction zone provisions described in the FSP. Reliable on-going sources of funding shall be established and acceptable to the applicable fire department, fire district, or fire agency with jurisdiction prior to the recording of the final map for the project. Specifically, and also without limiting the foregoing, the owners shall be responsible for the operation and maintenance of, and for potential liability arising from: ▪ provisions for the necessary repair and maintenance of the roadway surface (as determined by the HOA and/or applicable fire department, fire district, or fire agency with jurisdiction); ▪ removal of vegetation overgrowing the roadway and infringing on the roadway clear vertical height of 15 feet or width of 20 feet; ▪ provisions for the maintenance, repair, and/or replacement of NO PARKING - FIRE LANE signage or striping; and ▪ provisions for the necessary repair and maintenance of vehicle and pedestrian access gates and opening systems. ▶ The FSP shall include a section on Fuel Reduction Management and Defensible Space Concepts to provide a fuel modification plan that consists of the following		

Impacts	Significance before Mitigation	Mitigation Measures	Significance after all Mitigation	Significance after Mitigation in SACOG's Jurisdiction
		three defensible space zones for specific wildfire fuel reduction standards associated with buildings: ▪ Zone 0 – Ember-resistant Zone (0 to 5-feet from buildings); ▪ Zone 1 – Lean, Clean, and Green Zone (5 feet to 30 feet from buildings, or to the property line); ▪ Zone 2 – Reduce Fuel Zone (30 feet to 100 feet from buildings, or to the property line).		
Impact 3.19-2: Require the Installation or Maintenance of Associated Infrastructure in or near SRA or VHFHSZs that May Exacerbate Wildfire Risk or Result in Temporary or Ongoing Impacts to the Environment	PS	No mitigation is required.	LTS	LTS

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1 INTRODUCTION

This draft program environmental impact report (EIR) evaluates the environmental impacts of the proposed 2025 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS, referred to as the 2025 Blueprint). This Draft EIR has been prepared under the direction of the Sacramento Area Council of Governments (SACOG) in accordance with the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines.

1.1 REGULATORY CONTEXT

SACOG is designated by the state and federal governments as the Metropolitan Planning Organization (MPO) for the Sacramento region and, as such, is responsible for developing an MTP/SCS in coordination with El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties (including the 22 cities within those counties, with the exception of the Tahoe Basin). Every MPO is required by federal regulation (49 US Code [USC] 5304[f] and 23 Code of Federal Regulations [CFR] 450[b]) and California statute (California Government Code [CGC] Section 65080) to conduct long range planning to ensure that the region's transportation vision and goals are clearly identified and to promote effective decision making in furtherance of the vision and goals. The purpose of an RTP is to establish regional goals, identify present and future needs, deficiencies, and constraints, analyze potential solutions, estimate available funding, and propose investments. Following the passage of Senate Bill (SB) 375, MPOs also need to work closely with the California Air Resources Board (CARB) and the California Department of Housing and Community Development (CGC Section 65080 et seq.).

1.1.1 Federal Requirements

Under the Fixing America's Surface Transportation (FAST) Act (Public Law 114-94) and Moving Ahead for Progress in the 21st Century Act (MAP-21) (Public Law 112-141), the US Department of Transportation (USDOT) requires that MPOs, such as SACOG, prepare regional transportation plans and update them every 4 years if they are in areas designated as "nonattainment" or "maintenance" for the national ambient air quality standards. A regional transportation plan outlines the region's goals and strategies for meeting current and future mobility needs and for providing a foundation for transportation planning and funding decisions by local, regional, and State officials that are ultimately aimed at achieving a coordinated and balanced transportation system. In addition, these plans identify the region's transportation needs; set forth actions, programs, and a plan of projects to address the needs consistent with adopted regional strategies and goals; and document the financial resources needed to implement the plan. The process for development of the transportation plan takes into account all modes of transportation and is accompanied by a continuing, cooperative, and comprehensive planning approach that is also performance driven and outcome based, consistent with the provisions of MAP-21 and the FAST Act.

Federal requirements stipulate that regional transportation plans:

- must be developed through an open and inclusive process that ensures public input, seeks out and considers the needs of those traditionally under served by existing transportation systems, and consults with resource agencies to ensure potential problems are discovered early in the RTP planning process;
- must be developed for a period of not less than 20 years into the future;
- must reflect the most recent assumptions for population, travel, land use, congestion, employment, and economic activity;
- must have a financially constrained element, transportation revenue assumptions must be reasonable, and the long-range financial estimate must account for construction-related inflation costs;

- must include a description of the performance measures and performance targets used in assessing the performance of the transportation system;
- must include a system performance report evaluating the condition and performance of the system with respect to performance targets adopted by the state that detail progress over time;
- may include multiple scenarios for consideration and evaluation relative to the state performance targets as well as locally-developed measures;
- must conform to the applicable federal air quality plan, called the State Implementation Plan (SIP), for ozone and other pollutants for which an area is not in attainment; and
- must consider planning factors and strategies in the local context.

THE FEDERAL CLEAN AIR ACT OF 1970

The federal Clean Air Act (CAA) of 1970 (42 USC Section 7401 et seq.) was passed in response to growing concerns regarding the public health dangers of air pollution. The law was originally formulated in response to pollution generated by workplaces such as factories and subsequently was amended to address vehicle-generated pollution with a focus on regulating the composition of gasoline. In 1990, a set of CAA Amendments were passed that recognized the transportation system itself affects travel behavior, and by extension, air quality. As part of the amendments, new transportation projects are required to be in "conformity" with the CAA, meaning that transportation planning agencies such as SACOG must examine the long-term air quality impacts of their transportation system and ensure that it is compatible with the region's air quality goals. In doing so, regional agencies must work with state and local partner agencies to assess the impacts of growth on air pollution.

For MPO nonattainment and maintenance regions (the SACOG region is classified as nonattainment for ozone and particulate matter), the MPO, Federal Highway Administration, and Federal Transit Administration are responsible for making the conformity determination. Under the USDOT Metropolitan Planning Regulations (Title 23 CFR Part 450 and 771 and Title 49 CFR Part 613) and the US Environmental Protection Agency's Transportation Conformity Rule (Title 40 CFR Part 93) requirements, the regional transportation plan needs to meet four requirements: (1) regional emissions analysis, (2) timely implementation of Transportation Control Measures, (3) financial constraints analysis, and (4) interagency consultation and public involvement. The Transportation Conformity Rule (Title 40 CFR Part 93 Subpart A) sets forth the policy, criteria, and procedures for demonstrating and assuring conformity of transportation activities.

1.1.2 State Requirements

The RTP must also comply with Section 65080 of the California Government Code. The State requirements largely mirror the federal requirements and require each transportation planning agency in urban areas to adopt and submit an updated regional transportation plan to the California Transportation Commission (CTC) and Caltrans every four years. To ensure a degree of Statewide consistency in the development of regional transportation plans, CTC prepares Guidelines pursuant to Government Code Section 14522 that provide guidance so that MPOs will develop their plans to be consistent with federal and state transportation planning requirements. This is important because state statutes require that regional transportation plans serve as the foundation of the Federal Transportation Improvement Program (FTIP). The FTIPs are prepared by MPOs and identify the next four years of transportation projects to be funded for construction. The CTC cannot program projects that are not identified in the RTP (CTC 2024).

THE SUSTAINABLE COMMUNITIES AND CLIMATE PROTECTION ACT OF 2008

Under California's Sustainable Communities and Climate Protection Act, or SB 375 (Statutes of 2008, Chapter 728), SACOG is required to adopt an SCS as part of every MTP that aligns transportation, housing, and land use decisions to help achieve the per-capita reduction targets for greenhouse gas (GHG) emissions from passenger vehicles that are set by CARB. For each plan update, SACOG prepares a projection for the amount of regional growth in

population, employment, and households the region can expect over the life of the plan. While other efforts to reduce GHG emissions focus on alternative fuels and vehicle efficiency, SB 375 is intended to reduce emissions by coordinating land use and transportation planning at the regional level. SB 375 requires MPOs to develop an SCS as a component of a regional transportation plan, with the purpose of identifying policies and strategies to reduce per-capita passenger vehicle-generated GHG emissions. According to Section 65080(b)(2)(B) of the California Government Code, the SCS must:

- identify existing land uses,
- identify areas to house long-term population growth,
- identify areas to accommodate an 8-year projection of regional housing needs,
- identify transportation needs and the planned transportation network,
- consider resource areas and farmland,
- consider State housing goals and objectives,
- set forth an integrated forecasted development pattern and transportation network that will reduce GHG emissions, and
- comply with federal Clean Air Act requirements for developing a regional transportation plan.

1.2 PROJECT REQUIRING ENVIRONMENTAL ANALYSIS

The Blueprint is a long-range (at least 20-year) comprehensive plan for the region's multi-modal transportation system that is required for the region to qualify for some federal and state transportation funding for public transit, streets/roads, and bicycle and pedestrian improvements. The proposed 2025 Blueprint incorporates countywide transportation planning developed by the El Dorado County Transportation Commission and the Placer County Transportation Planning Agency under memoranda of understanding between those agencies and SACOG. SACOG's last adopted MTP/SCS was published in 2019 and has a 2040 planning horizon.

The 2025 Blueprint aims to achieve various federal, state, regional, and local policy objectives related to sustainable development, transportation, and GHG emission reduction while considering financial, growth, and regulatory constraints. The plan is built on extensive data analysis, public outreach, and collaboration with local agencies and experts while being grounded in the board-adopted Triple Bottom Line framework, emphasizing a balanced approach to equity, economy, and environment.

For the 2025 Blueprint, the forecast of growth (called the regional growth projections) was adopted by the SACOG board in 2022 and anticipates that the region will grow by approximately 580,000 people, and will add just over 260,000 new jobs, and 278,000 new homes. The 2025 Blueprint is designed to achieve the regional SB 375 GHG target while prioritizing maintenance and rehabilitation of existing infrastructure. It integrates smart land use planning principles with a diverse and efficient transportation network. The plan identifies targeted transportation investments, including new capital improvements (e.g., highways, roads, bridges, and light rail), policies such as roadway pricing strategies (e.g., tolling and mileage fees), and multimodal benefits aimed at connecting housing to jobs, managing congestion, and addressing forecasted travel volumes.

For further information on the proposed project, see Chapter 2, "Project Description." The full 2025 Blueprint is available online at: https://www.sacog.org/planning/blueprint.

1.3 PUBLIC REVIEW PROCESS

SACOG is committed to effectively involving the public in the MTP/SCS update. In accordance with the Public Participation Plan approved by the Board of Directors at the outset of the 2025 Blueprint planning process, SACOG has provided, and will continue to provide, opportunities for the public to participate in the development of the proposed 2025 Blueprint. SACOG hosted eight Focus Groups with 69 residents representing each of the six-counties

in 2023, conducted a scientifically administered and demographically representative Built Environment Poll completed by approximately 3,000 residents, collected input through the 2025 Blueprint Survey, set up a table at each pop-up workshop at community events in nearly all of the counties and cities in the region, introduced the Public Outreach and Engagement Grant Program, hosted the 2025 Blueprint Regional Workshop in Folsom, and visited every city council and board of supervisors in the region to engage local officials on the regional initiatives and the 2025 Blueprint development.

1.3.1 EIR Notice of Preparation and Public Scoping

CEQA requires an early and open process for determining the scope of issues that should be addressed in the EIR. The Notice of Preparation (NOP) provides formal notification to all federal, State, regional, and local agencies involved with funding or approval of the project, and to other interested organizations and members of the public, that an EIR will be prepared for the project. The NOP is intended to encourage interagency communication concerning the proposed plan and to provide background information about the proposed plan sufficient to allow agencies, organizations, and individuals to respond with specific comments and questions on the scope and content of the EIR.

SACOG initiated the scoping process on February 4, 2025, through the issuance of the NOP and distribution to responsible and trustee agencies, interested parties and organizations, and private organizations and individuals that could have interest in the project. A copy of the NOP and the written comments received during the 30-day NOP period are provided in Appendix A.

SCOPING MEETINGS

A scoping meeting is required by State CEQA Guidelines Section 15082(c)(1) for projects of Statewide, regional, or areawide significance. The virtual scoping meetings were held on February 26 and February 27, 2025. At each meeting, a presentation by SACOG staff provided an overview of the proposed plan, the CEQA process, and key environmental issues identified in the NOP. Written comments were accepted during the meetings.

The NOP and public scoping meeting also helped to meet federal requirements for public involvement in development of the MTP, as specified in 23 USC 134(i), the Moving Ahead for Progress in the 21st Century Act, and the FAST Act. In particular, through the NOP and scoping process, resource agencies, public agencies, tribal governments, transportation providers, and the public had an opportunity to provide early input on environmental issues and concerns that could be addressed in the EIR for the proposed plan. In addition, SB 375 requires opportunities for input by local officials and the public into the development of the SCS and the alternative planning strategy if one is prepared. Participation requirements include regional target workshops and development of an SCS public participation plan.

In addition to circulating the NOP and holding the scoping meeting, SACOG initiated tribal consultation consistent with Assembly Bill 52, Statutes of 2014. This process is discussed in more detail in Section 3.17, "Tribal Cultural Resources."

1.3.2 Draft EIR Review

This Draft EIR is being circulated for public review and comment for a period of 63 days. During this period, comments from the general public, organizations, and agencies on environmental issues may be submitted to the lead agency. Upon completion of the public review and comment period, a Final EIR will be prepared that will include both written and oral comments on the Draft EIR received during the public review period, responses to those comments, and any revisions to the Draft EIR made in response to comments.

Comments on the 2025 Blueprint Draft EIR may be made in writing before the end of the comment period on August 8, 2025. Written comments should be mailed or emailed to the addresses provided below.

By mail: ATTN: Clint Holtzen
SACOG
1415 L Street, Suite 300
Sacramento, CA 95814

By e-mail: eircomments@sacog.org

1.3.3 Final EIR Certification

Following the closure of the public comment period, responses to the comments received on the Draft EIR will be prepared and published, and together with the Draft EIR, and any revisions thereto, will constitute the Final EIR. Before adopting the 2025 Blueprint, SACOG is required to certify that the EIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the EIR, and that the EIR reflects its independent judgment as the lead agency.

1.4 DRAFT EIR SCOPE

This Draft PEIR includes an evaluation of the following environmental issue areas, as well as other CEQA-mandated issues (e.g., cumulative impacts, growth-inducing impacts, significant unavoidable impacts, alternatives):

- aesthetics;
- agricultural and forestry resources;
- air quality;
- biological resources;
- cultural resources;
- geology, soils, and paleontological resources;
- greenhouse gas emissions and energy;
- hazards and hazardous materials;
- hydrology and water quality;
- land use and planning;
- mineral resources;
- noise and vibration;
- population, employment, and housing;
- public services;
- recreation;
- transportation;
- tribal cultural resources;
- utilities and service systems; and
- wildfire.

Under the CEQA statutes and the State CEQA Guidelines, a lead agency may limit an EIR's discussion of environmental effects when such effects are not considered potentially significant (PRC Section 21002.1[e]; State CEQA Guidelines Sections 15128, 15143). As a result of the review of existing information and the scoping process, it was determined that each of the issue areas listed above should be evaluated fully in this Draft EIR.

1.5 DRAFT EIR ORGANIZATION

This Draft EIR is organized into chapters, as identified and briefly described below. Chapters are further divided into sections (e.g., Chapter 3, "Environmental Impacts and Mitigation Measures," and Section 3.15, "Recreation"):

- The "Executive Summary": This chapter introduces the 2025 Blueprint; provides a summary of the environmental review process, effects found not to be significant, and key environmental issues; and lists significant impacts and mitigation measures to reduce significant impacts to a less-than-significant level.
- Chapter 1, "Introduction": This chapter provides a synopsis of the project, a description of the scope of this EIR, a summary of the public review process, a description of the organization of this EIR, and definitions of standard terminology used in this EIR.

- Chapter 2, "Project Description": This chapter describes the location, background, and objectives for the 2025 Blueprint, and describes the plan elements in detail.
- Chapter 3, "Environmental Impacts and Mitigation Measures": The sections in this chapter evaluate the expected environmental impacts generated by the 2025 Blueprint, arranged by subject area (e.g., land use, hydrology and water quality). In each subsection of Chapter 3, the regulatory setting, environmental setting, environmental analysis, and thresholds of significance are described.
- Chapter 4, "Alternatives": This chapter evaluates alternatives to the 2025 Blueprint, including alternatives considered but eliminated from further consideration, the No Project Alternative, and alternative MTP/SCS options. The environmentally superior alternative is identified.
- Chapter 5, "Other CEQA Sections": This chapter addresses growth-inducing impacts, significant and unavoidable adverse impacts, and irreversible and irretrievable commitment of resources. Additionally, this chapter provides an analysis of the potential cumulative impacts that would result from implementation of the 2025 Blueprint together with other past, present, and probable future projects.
- Chapter 6, "References": This chapter identifies the organizations and persons consulted during preparation of this Draft EIR and the documents and individuals used as sources for the analysis.
- Chapter 7, "Report Preparers": This chapter identifies the preparers of the document.

1.6 STANDARD TERMINOLOGY

This Draft EIR uses the following standard terminology:

Metropolitan Transportation Plan: A set of financially constrained multimodal transportation investments. California statute refers to these documents as "Regional Transportation Plans" or RTPs. However, several California MPOs refer to RTPs as "Metropolitan Transportation Plans" or MTPs, which is the terminology used in federal planning regulations. SACOG uses "MTP" to differentiate from the RTPs prepared by the El Dorado County Transportation Commission and the Placer County Transportation Planning Agency.

Sustainable Communities Strategy: A land use forecast based on a projection for the amount of regional growth in population, employment, and households over the life of the plan.

2025 Blueprint: The title of SACOG's proposed MTP/SCS. The phrases 2025 Blueprint and proposed plan are also sometimes used to describe this document.

Regional Growth Projections: A forecast of growth in population, employment, and households that is anticipated in the SACOG region through 2050.

Development Pattern: The spatial distribution of growth assumed in the 2025 Blueprint.

Plan area: The plan area for the 2025 Blueprint is the six county SACOG region.

Environmental Impact Determinations:

- "No impact" means no change from existing conditions (no mitigation is needed).
- "Less-than-significant impact" means no substantial adverse change in the physical environment (no mitigation is needed).
- "Potentially significant impact" means a substantial adverse change in the environment that might occur (mitigation is recommended because potentially significant impacts are treated as significant).
- "Significant impact" means a substantial adverse change in the physical environment that would occur (mitigation is recommended).
- "Significant and unavoidable impact" means a substantial adverse change in the physical environment that would occur and that cannot be avoided, even with the implementation of all feasible mitigation.

2 PROJECT DESCRIPTION

2.1 PROJECT BACKGROUND AND NEED

The proposed project is the 2025 update of the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS, referred to as the 2025 Blueprint). A MTP is a long-range (at least 20-year) comprehensive plan that is required for the region to qualify for some federal and state transportation funding for public transit, streets/roads, and bicycle and pedestrian improvements. Preparing the MTP is one of SACOG's primary statutory responsibilities under federal and state law. Under California's Sustainable Communities and Climate Protection Act, or Senate Bill (SB) 375 (Statutes of 2008, Chapter 728), SACOG is required to adopt an SCS as part of every MTP that aligns transportation, housing, and land use decisions to help achieve the per-capita reduction targets for greenhouse gas (GHG) emissions from passenger vehicles that are set by the California Air Resources Board (CARB).

The 2025 Blueprint aims to achieve various federal, state, regional, and local policy objectives related to development, transportation, and GHG emission reduction while considering financial, growth, and regulatory constraints. The plan is built on extensive data analysis, public outreach, and collaboration with local agencies and experts while being grounded in the board-adopted Triple Bottom Line framework, emphasizing a balanced approach to equity, economy, and environment. The 2025 Blueprint revisits the Regional Growth Projection, Development Pattern, and transportation investments that served as the foundation of the 2020 MTP/SCS, which was adopted in November of 2019 and currently guides growth and transportation investments in the region.

2.1.1 Regional Planning Context for the 2025 Blueprint

SACRAMENTO REGION BLUEPRINT

The 2004 Blueprint growth strategy was the product of a 3-year regional visioning process that engaged citizens, special interest groups, and elected officials from each of SACOG's member jurisdictions on how the region should accommodate the forecasted population and employment growth. The original Blueprint adopted by the SACOG Board of Directors continues to guide the Sacramento region. This 2025 update of the region's MTP/SCS is the latest in a series of plans since 2004 that help to implement the vision of the original Blueprint. With the 2025 update coming roughly 20 years since the adoption of the original Blueprint and the horizon year looking out to 2050, which was also the horizon year of the original effort, SACOG has titled this plan update as the 2025 Blueprint. However, the plan update is not intended to supersede or replace the original Blueprint.

PRIOR MTP/SCS

In 2012, SACOG adopted the 2012 MTP/SCS, building upon the consensus achieved through the Blueprint process and the 2008 MTP to develop a long-range regional transportation plan that supports Blueprint priorities. The 2012 MTP/SCS was SACOG's first MTP to include an SCS, as required by SB 375, which proactively linked land use, air quality, and transportation needs. In 2016, SACOG adopted its second MTP/SCS through a minor implementation-focused update. The 2020 MTP/SCS increased the emphasis on sustainable growth strategies, focusing more on compact development forms with enhanced transit access that emphasized bus services over more expensive light rail and introduced pricing strategies, such as tolling, to help fund transportation.

2.2 PLAN AREA

The plan area for the 2025 Blueprint includes El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties, exclusive of the Tahoe Basin (see Figure 2-1). The SACOG region also includes 22 incorporated cities within its

boundaries: Auburn, Citrus Heights, Colfax, Davis, Elk Grove, Folsom, Galt, Isleton, Lincoln, Live Oak, Loomis, Marysville, Placerville, Rancho Cordova, Rocklin, Roseville, Sacramento, West Sacramento, Wheatland, Winters, Woodland, and Yuba City. The plan area has an existing (2020) population of 2,540,353. As of 2020, 71 percent of jobs, 61 percent of housing units, and 62 percent of the population of the plan area were in incorporated cities.

The plan area encompasses approximately 6,000 square miles (3,846,837 acres) and is bounded by Colusa, Lake, Napa, and Solano counties to the west; Butte, Sierra, and Nevada counties to the north; the Lake Tahoe Basin, Plumas, and Alpine counties to the east; and Amador, San Joaquin, and Contra Costa counties to the south. The bulk of the plan area is located in the Sacramento Valley, a basin generally bounded by the Sierra Nevada mountain range to the east and the coastal ranges to the west. The eastern portion of the region – Placer County, El Dorado County, and Eastern Yuba County – is located in the Sierra Nevada mountains and foothills. The western portion of the region, in Yolo County, marks the eastern edge of the coastal mountain ranges. North to south, the plan area spans from the lower Sacramento Valley in northern Sutter and Yuba counties to the Sacramento River Delta in southern Sacramento County. In the valley portion of the plan area – Sacramento County, western Placer County, western Yuba County, Sutter County, and eastern Yolo County – the topography is generally flat, with the exception of the Sutter Buttes mountain range in Sutter County.

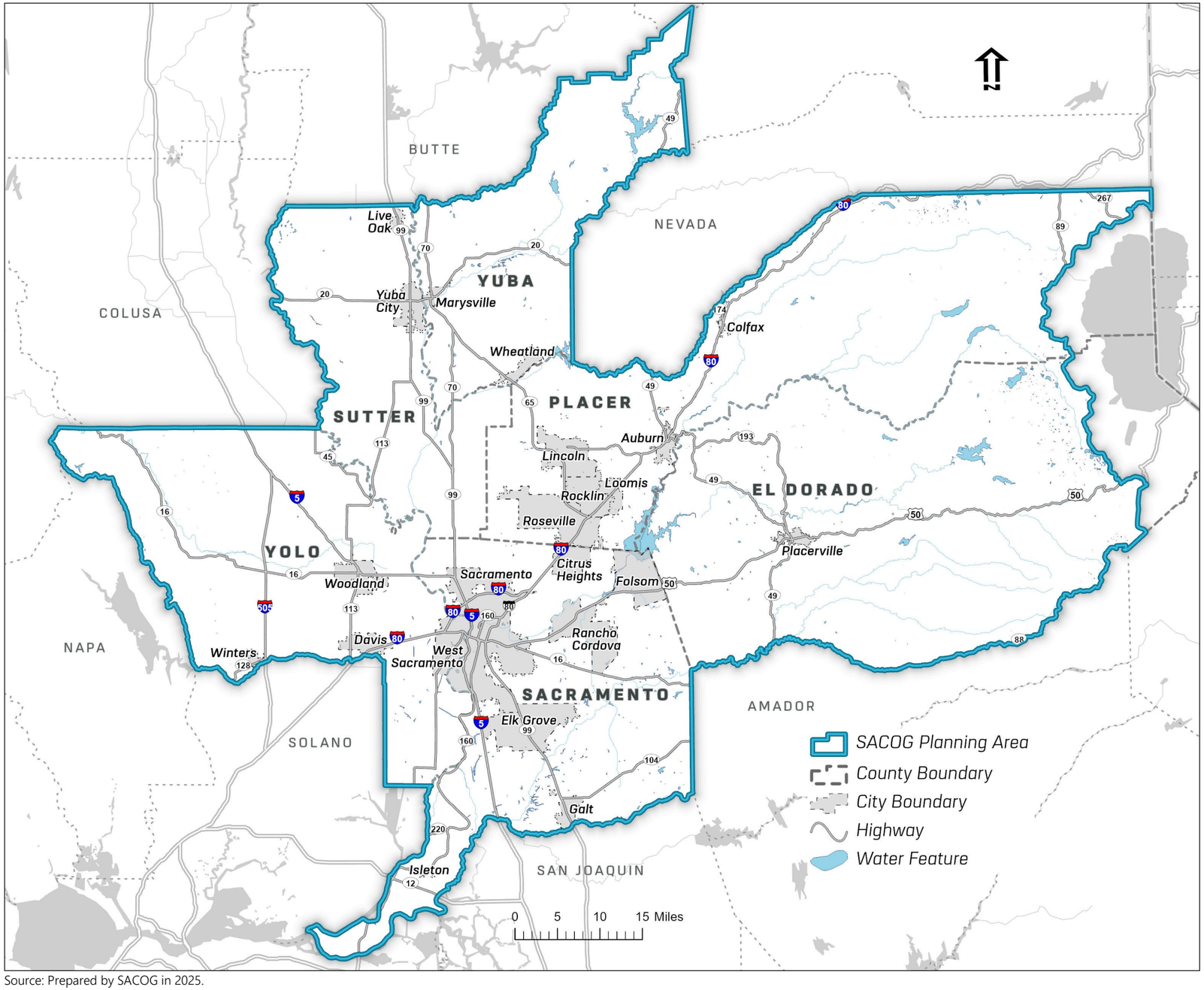
The existing transportation system within the plan area supports a broad range of passenger and freight travel. The roadway system includes three interstate highways, several state highways, and numerous local roadways that serve various combinations of auto, truck, pedestrian, bicycle, and transit travel. Other infrastructure includes a deep-water shipping port, a major international airport, numerous general aviation airports, and freight and passenger rail service.

2.3 PLAN OBJECTIVES

The primary purpose of the 2025 Blueprint is to meet federal and state requirements for regional transportation plans and sustainable communities strategies. Within this framework, the objectives of the plan are to:

- Create opportunities for residents to live and work in equitable, environmentally healthy, and economically vibrant communities.
- Provide a mix of housing types in walkable places that are affordable, that have access to economic opportunity, and that allow people to spend less time driving.
- Revitalize commercial corridors, rural main streets, and green zones.[1]
- Create complete communities by bringing housing to the jobs and jobs to the housing.
- Protect agricultural and natural lands.
- Identify policies and strategies that reduce per capita, passenger vehicle-generated GHG emissions by 19 percent to achieve the target set by CARB under SB 375.
- Implement innovative mobility projects, invest in high-capacity corridors and high-frequency bus service, prioritize lower cost transit solutions, and improve the responsiveness of the transportation system.
- Reduce per capita vehicle miles traveled (VMT).
- Build and maintain a safe, reliable, and multimodal transportation system.
- Find new and innovative ways to finance the costs of building and maintaining the transportation system in both the near- and long-term.
- Plan for natural disasters and extreme weather, including the need to evacuate or provide emergency services during natural disasters.

[1] Established by local jurisdictions as part of a SACOG program known as Green Means Go, Green Zones are areas that have capacity for infill growth, but face market or other barriers that have prevented development from occurring.



Source: Prepared by SACOG in 2025.

Figure 2-1 Plan Area

2.4 DEVELOPMENT OF THE 2025 BLUEPRINT

Economic, demographic, and financial planning assumptions are central to the 2025 Blueprint and serve as constraints during the plan's development. The following provides an overview of the planning assumptions used to develop the regional growth and transportation system assumptions in the 2025 Blueprint. These planning assumptions do not affect local land use authority or preclude a local jurisdiction from planning and approving growth that is different in terms of total units or geographic extent. SB 375 specifically states that an SCS does not regulate land use, that city and county land use policies and plans are not required to be consistent with the SCS, and that nothing "in a sustainable communities strategy shall be interpreted as superseding the exercise of the local land use authority of cities and counties within the region" (California Government Code Section 65080[b][2][K]).

The planning process for the 2025 Blueprint began in 2021 and was divided into three major planning phases, each of which included robust public outreach and coordination or consultation with stakeholders and government bodies:

1) Policy Framework and Growth Projections
2) Scenario Testing
3) Final Scenario and Policy Development

First, in 2021 the SACOG board adopted a policy framework that would center the 2025 Blueprint update on advancing the Triple Bottom Line goals to improve outcomes for the economy, equity, and the environment. That framework serves to guide the analysis, discussion, and policy focus in the 2025 Blueprint. The board also adopted a Regional Growth Projection that estimates population, housing, and job growth in February of 2022.

Second, to better understand how land use and transportation decisions affect the future and to help identify strategies that can remain durable across a range of futures despite changing and disruptive uncertainties, SACOG undertook a scenario planning effort, referred to as Pathways. Pathways provided the analysis and metrics that served as a learning tool for unpacking the many complex and intersecting issues facing the region over the next 20 years in housing and land use, transportation management, regional growth, environmental resources, economic development, systemic racial disparities, and climate change and resilience. The Pathways explored the tradeoffs inherent in where and how growth is accommodated.

Finally, in 2024, the SACOG board adopted a set of land use and transportation assumptions. In the 2 years leading up to the board's adoption of final assumptions, SACOG engaged with local agencies from all 28 jurisdictions, California Department of Transportation (Caltrans), transit operators, developers, advocacy groups, the public, and other partners to analyze and test multiple options for how the region could grow. The SACOG board weighed in on these discussions during multiple committee and board meetings in 2023 and in the spring and summer of 2024. Ultimately, the board elected to adopt a scenario that aims to maximize benefits for the 2.5 million existing residents as well as future residents whether they are newcomers to the region or young people raised here and looking to establish their own households.

2.4.1 Triple Bottom Line Policy Framework

The Triple Bottom Line policy framework has shaped the analysis, board discussions, and recommendations throughout plan development. The goal statements below serve as the foundation for a regional conversation about the role transportation and land use decisions can play in beginning to reduce disparities and divides that exist by race, ethnicity, income, and in rural and urban areas.

- Equity: A just and inclusive region where government makes investments for and with historically marginalized communities so race can no longer be used to predict health or economic outcomes, and outcomes for all groups are improved.

- Economy: A diversified regional economy in which all people have access to resources that give them the opportunity to realize their full potential. This future economy will also capitalize on key economic clusters where the region can achieve a competitive edge over our peers across the country, including agriculture and food, health sciences, and innovative mobility.
- Environment: A safe and resilient region for all residents, where natural resources and air quality are sustainably managed so people can thrive here for generations.

2.4.2 Developing the Regional Growth Projection and Development Pattern

In each MTP/SCS update cycle, SACOG prepares a Development Pattern to accommodate the Regional Growth Projection of population, employment, and housing demand. The 2025 Blueprint Regional Growth Projection includes a forecast of the amount of growth that will occur in the study area over a 30-year planning period (2020 to 2050). The Regional Growth Projection and subsequent Development Pattern are based on economic and demographic projections, adopted and pending land use plans and policies, market and economic considerations, and other state and federal policies and regulations that can affect the location and pace of growth. The plan is not necessarily intended to reflect a growth outcome based on business-as-usual policies and investments or even the point-in-time demand of today's residents. Rather, the intent is to outline a growth pattern and transportation investments that allow the region to achieve a set of goals and that could realistically occur given policy direction, public investments, and anticipated future demand trends. For the 2025 Blueprint, the Regional Growth Projection anticipates that the region will grow by approximately 580,000 people, and will add 263,000 new jobs and 278,000 new homes.

REGIONAL GROWTH PROJECTION PREPARATION

SACOG typically updates its growth projections with each 4-year MTP/SCS update cycle. SACOG developed the regional growth projections in partnership with the Center for Continuing Study of the California Economy (CCSCE), including projections of future employment (by major employment sector), population, and household growth at the regional scale. The regional growth projection method follows three major steps: 1) employment projections based on projections of United States and California job growth and the competitive position of the Sacramento region to capture a share of the state and national job growth; 2) population projections based on projected job growth, accounting for foreign immigration and domestic migration into the region; and 3) household projections based on projected population growth. Housing unit projections are based on the assumption that the region must accommodate all of the projected housing demand for the planning period. This forecasting methodology for population is similar to the California Department of Finance (DOF) methodology, except that DOF projections do not forecast employment or households. This draft information is summarized for, and reviewed by, the SACOG board and staff, member cities and counties, and stakeholders and is ultimately approved by the SACOG board. The Regional Growth Projection approved by the SACOG board becomes the growth forecast that is used for planning.

DEVELOPMENT PATTERN PREPARATION

The Development Pattern assumed in the 2025 Blueprint is the result of a technical process that included coordination with local agency planning departments and stakeholders, consideration of market and policy/regulatory factors, and direction from the SACOG board. This process is governed by federal requirements related to regional transportation plans and the federal Clean Air Act (CAA) of 1970 (42 US Code [USC] Section 7401 et seq.), including Highways (23 Code of Federal Register [CFR] Section 450) and Environmental Protection (40 CFR Section 93), which require that land use, population, and employment model assumptions are based upon the best available information, and that there is a reasonable relationship between the expected land use and the envisioned transportation system. This process is also affected by SB 375, and specifically by its requirement to develop an SCS.

A number of factors are considered in developing the Development Pattern. Local general plans, spheres of influence, community and specific plans, land division and development codes, and design guidelines are considered, as they guide the type and intensity of future land uses. State and federal policies and regulations are also considered, most notably (but not limited to) those relating to development in floodplains and other natural hazard areas (e.g., fire), federal Clean Water Act of 1972 (33 USC Section 1251 et seq.) and federal Endangered Species Act of 1973 (16 USC Section 1531 et seq.) permit requirements, Transportation Control Measures in air quality plans under the CAA, and state housing requirements.

Practical considerations affecting the cost and timing of providing infrastructure (e.g., water, sewer, transportation) are also analyzed and considered. Market and economic considerations are also analyzed, such as consumers' interest in different types of housing and developers'/builders' ability to deliver that housing. Future demographic trends identified in the Regional Growth Projection (e.g., percentage of households with children, older heads of households) are an important part of this analysis. Performance and the growth pattern's effect on the plan's ability to achieve the GHG reduction target is also a consideration. Appendix D: Land Use Forecast Documentation of the 2025 Blueprint provides further detail on the land use forecasting process for the plan.

COMMUNITY TYPE FRAMEWORK

To understand the existing development pattern for the region, SACOG developed a community type framework that designates land into one of five community types based on location, land use composition, proximity to employment and services, and local plans for expansion and preservation. The community types are detailed below and mapped in Figure 2-2.

Center and Corridor Communities. Center and Corridor Communities are identified in local plans as historic downtowns, main streets, suburban or urban commercial corridors, rail station areas, central business districts, or town centers. They typically have more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the communities surrounding them. Some have frequent transit service, either bus or rail, and all have pedestrian and bicycling infrastructure that is more supportive of walking and bicycling than other community types.

Established Communities. Established Communities are typically the areas adjacent to, or surrounding, Center and Corridor Communities. Local land use plans aim to maintain the existing character and land use pattern in these areas. Land uses in Established Communities are typically made up of existing low- to medium-density residential neighborhoods, office and industrial parks, or commercial strip centers. Depending on the density of existing land uses, some Established Communities have bus service; others may have commuter bus service or very little service. The majority of the region's roads are in Established Communities.

Developing Communities. Developing Communities are typically, though not always, situated on vacant land at the edge of existing urban or suburban development; they are the next increment of urban expansion. Developing Communities are identified in local plans as special plan areas, specific plans, or master plans and may be residential-only, employment-only, or a mix of residential and employment uses. Transportation options in Developing Communities often depend on the timing of development. Bus service, for example, may not be reliable until a community builds out. Walking and bicycling environments vary widely, although many Developing Communities are designed with dedicated pedestrian and bicycle trails.

Rural Residential Communities. Rural Residential Communities are typically located outside of urbanized areas and designated in local land use plans for rural residential development. Rural Residential Communities are predominantly residential with some small-scale hobby or commercial farming. Travel occurs almost exclusively by automobile and transit service is minimal or nonexistent.

Agricultural and Natural Lands. These areas are not expected to develop during the 2025 Blueprint planning period. Today, these areas are dominated by commercial agriculture, forestry, resource conservation, mining, flood protection, or a combination of these uses. Some have long-term plans and policies to preserve or maintain the existing "non-urban" uses.

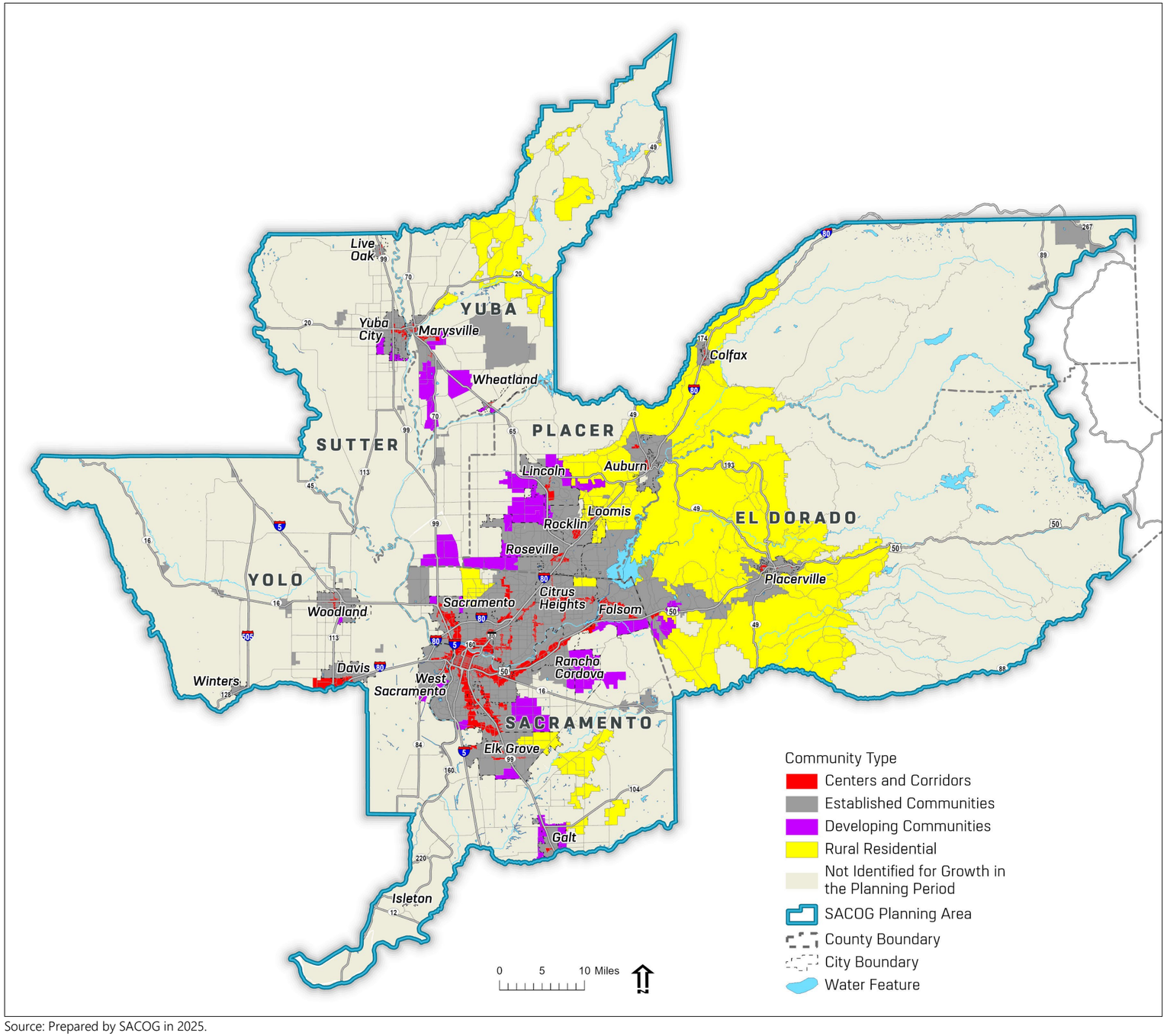
HIGH FREQUENCY TRANSIT AREA FRAMEWORK

A subset of the 2025 Blueprint housing and employment growth falls within what SACOG refers to as High Frequency Transit Areas (HFTAs). HFTAs are areas of the region within 0.5 mile of a major transit stop (i.e., existing or planned bus, light rail, street car, or train station or the intersection of two 20-minute frequency bus routes) or high-quality transit corridor included in the 2025 Blueprint. A high-quality transit corridor is a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours (Public Resources Code [PRC] Section 21155). HFTAs are an overlay geography and do not necessarily correspond directly to community types. The goal, therefore, in identifying HFTAs in the 2025 Blueprint is to facilitate the use of SB 375 CEQA streamlining benefits available to qualifying residential and mixed-use projects and transit priority projects (TPPs).

The housing and employment assumptions for the HFTAs in the 2025 Blueprint were based on the Development Pattern assumptions described above. Once the Development Pattern assumptions were completed, high-quality transit service was assigned to transportation corridors. Five factors have been shown to influence the transit ridership and productivity of different types of transit service in transit corridors:

- Population and Job Density—higher density corridors support more frequent transit service.
- Mix of Use—corridors with a mix of complementary land uses support use of transit during off-peak periods, especially midday and evening.
- Income Demographics—corridors with higher concentrations of lower income households generate higher demand for transit service.
- Block Size/Street Pattern—areas where the street pattern supports walking also support pedestrian access to transit.
- Access to Job Centers—locations with concentrations of employment generate potential for peak/commuter transit. Job centers where parking is normally paid out of pocket generate the highest levels of transit, carpooling, and non-auto modes of commute.

These factors were used in an iterative process to develop the transit service assumptions that yielded the HFTA geography. Some existing transportation corridors with relatively lower growth were also identified for high-quality transit service because of their location between major growth areas or because of existing transit needs that cannot be served at current funding levels but are expected to be served as the region grows in population and revenues for transit funding. Appendices C: Land Use Forecast, D: Land Use Forecast Documentation, and E: Plan Performance of the 2025 Blueprint include full discussions of the land use and transportation forecasting methodologies.



Source: Prepared by SACOG in 2025.

Figure 2-2 Community Types in the Plan Area

2.4.3 Developing the Transportation System

SACOG must identify a set of financially constrained multimodal transportation investments that serve the Development Pattern adopted by the board for the 2025 Blueprint. To develop this list of transportation projects, staff reviewed more than 1,600 projects nominated by cities, counties, transit operators, and others. Staff analyzed projects using the Triple Bottom Line framework to gauge their potential to minimize critical congestion bottlenecks, reduce emissions, provide transportation choices, increase access to opportunity (e.g., jobs, education, shopping, key services), and improve safety. Through SACOG board direction, public and stakeholder engagement, technical analyses, and coordination with local and state agencies, SACOG developed a package of transportation projects tailored to fit projected land uses, demographic changes, and travel needs in the region through 2050.

FINANCIAL ASSUMPTIONS

Funding to support the transportation investments in the 2025 Blueprint comes from a number of federal, state, and local sources, each with specific purposes and restrictions. Federal and state laws require that SACOG only assumes revenues that can reasonably be expected over the planning period. The revenue forecast also includes sources of funding for transportation that would come from roadway and mileage pricing strategies. Both of these strategies are supported by ongoing research at the federal, state, and regional levels to find long-term replacements to fuel-based taxes. Appendix B: Revenue Forecast of the 2025 Blueprint provides a more detailed description of budget and investment assumptions.

2.5 PLAN CHARACTERISTICS

SACOG's purpose in developing the 2025 Blueprint is to provide a strategy to approach the many challenges faced by the Sacramento region as the population grows and the region expands. The 2025 Blueprint seeks to guide the Sacramento region toward a more sustainable future through better integration of smart land use decisions with a well-managed transportation system. The intent of the 2025 Blueprint is to support economic prosperity and accommodate the expected population growth and accompanying demand for transportation in the region through a multi-modal approach based on the following strategies:

- Prioritize new growth in existing cities, suburbs, and small towns
- Revitalize commercial corridors, rural main streets, and Green Zones
- Create complete communities by encouraging job growth outside of existing job centers
- Create opportunities through growth in tradable industries like business services, working lands, precision manufacturing, research and development
- Build more types of housing for today's and tomorrow's households, from missing middle to larger apartments
- Create a resilient region and protect agricultural and natural lands
- Rejuvenate transit fiscal health
- Optimize Existing Roadways
- Accelerate tolling and managed lanes
- Explore incentives for mobility options that reduce passenger vehicle carbon emissions
- Leverage ITS to maximize our existing roadway capacity
- Invest in an equitable Passenger and freight ZEV transition
- Focus on investments that drive economic opportunity
- Upgrade bus frequency to support infill housing

- Connect regional attractions with trails to support hospitality
- Foster passenger rail links to the megaregional and statewide economy

2.5.1 2025 Blueprint Contents

The 2025 Blueprint is organized into the following chapters:

Chapter 1 –What is the MTP/SCS? Describes SACOG's role and state and federal requirements that apply to the 2025 Blueprint.

Chapter 2 – How the Public Shaped this Blueprint. Describes the community outreach process.

Chapter 3 – Housing, Jobs, and Land Use. Envisions the region in 2050 and identifies programs to achieve the vision.

Chapter 4 – Transportation Vision. Identifies and prioritizes transportation infrastructure projects.

Chapter 5 – Land Use and Transportation Integration. Forecasts that plan integration will result in better access to jobs, shorter travel trips, and cleaner air.

Chapter 6 – Policies and Implementation Actions. Identifies the policies and actions of the plan.

2.5.2 2025 Blueprint Policies and Supportive Strategies

As a federal and state mandated plan, the 2025 Blueprint is required to include policies and strategies that outline the various steps needed to drive implementation of the plan across numerous agencies, partners, and stakeholders. Chapter 6, "Policies and Implementation Actions," in the 2025 Blueprint identifies key steps to support four strategic priorities that build on region's existing commitments. Alignment with the plan is a requirement for some programs, and can provide a strong signal to state and federal leaders that the region is coordinated, in line with federal and state priorities, and ready for investment. The policies of the 2025 Blueprint support four strategic priorities.

BUILD VIBRANT PLACES FOR TODAY'S AND TOMORROW'S RESIDENTS

- Vibrant-1: Provide incentives, information, tools, technical assistance, and encouragement for legislative and regulatory reform and investment in Center & Corridor and Established Communities that increase housing options, jobs and services, and access to amenities.
- Vibrant-2: Identify and secure stable sources of funding and financing to continue the momentum of Green Means Go and accelerate the construction of a range of housing options that are affordable in low vehicle miles traveled (VMT) areas of the region.
- Vibrant-3: Encourage local policy reforms that facilitate missing middle housing, strategically allow for higher density housing, transition from discretionary to by right development review, reduce government mandated parking requirements, incentivize accessory dwelling units, and reduce displacement by protecting tenants and funding subsidized affordable housing.
- Vibrant-4: Evaluate and monitor progress towards both enacting the local housing policy reforms described in Vibrant-3 as well as housing construction relative to 2025 Blueprint outcomes.
- Vibrant-5: Explore prioritizing new infrastructure investments and transportation funding decisions where there is existing or demonstrated progress towards policy reforms referenced in Vibrant-3.
- Vibrant-6: Coordinate strategically phased growth in Developing Communities that expand the region's footprint in ways that create complete communities with jobs, housing choices, connected streets, and convenient access to public transportation.

- Vibrant-7: Support the implementation of SACOG's Regional Housing Needs Plan by affirmatively furthering fair housing, taking proactive steps to overcome patterns of residential segregation, clearing barriers to housing in high opportunity areas, supporting other activities identified by local governments in adopted housing elements.
- Vibrant-8: Encourage growth in industries that will grow the region's economy, such as business services, agriculture, manufacturing, and research, by supporting economic development efforts and strategies that boost economic mobility.
- Vibrant-9: Protect and enhance important tribal cultural resources in the SACOG region by partnering with cities, counties, Caltrans, tribal governments, and community leaders to build a practice of early communication, collaboration, and consultation with tribal governments in local and regional transportation and land use planning processes.
- Vibrant-10: Prioritize and incentivize meaningful public engagement by actively involving all communities, including historically underrepresented groups in the development and implementation of SACOG programs.

FOSTER THE NEXT GENERATION OF MOBILITY SOLUTIONS

- NextGen-1: Encourage context-responsive shared mobility programs (car share, bike share, scooter share, and microtransit) to increase mobility options for residents and bridge the first-mile/last-mile gap to fixed-route bus and rail.
- NextGen-2: Cultivate regional understanding and support for alternatives to driving alone by improving regional travel planning tools, expanding transportation demand management programs, and facilitating pilots and demonstration projects.
- NextGen-3: Support a transition to zero-emission passenger, freight, and transit vehicles that is equitable and considers the diversity of regional needs and contexts including rural, urban, and suburban communities as well as historically underrepresented communities.
- NextGen-4: Support the long-term fiscal health of transit by collaborating with transit providers to identify productivity and cost-effectiveness measures for transit.
- NextGen-5: Advance intelligent transportation systems (ITS) to reduce congestion and improve multimodal reliability.

MODERNIZE THE WAY WE PAY FOR TRANSPORTATION INFRASTRUCTURE

- Invest-1: Engage in the state's effort to replace the statewide fuel tax with a modern funding mechanism, such as a road usage charge, that can adapt to and keep up with changing needs and conditions.
- Invest-2: Find and pursue reliable funding strategies to meet the maintenance needs of roads that support rural economies, natural resource-based industries, agriculture, farm-to-market routes, and freight corridors.
- Invest-3: Partner with the Capital Area Regional Tolling Authority (CARTA), local agencies, and Caltrans to develop and operate a regional network of toll facilities to improve traffic management, transit reliability, and operations on the regional highway system.
- Invest-4: Identify and support funding strategies that are sensitive to changes in roadway demand during different parts of the day (peak/off-peak) and across different facility types with the objective of managing demand and providing travel choice.
- Invest-5: Encourage revenues generated from tolling to first be used to build and maintain the regional network of toll facilities and, where surplus revenue is available, on strategic transit services (e.g., express buses) or other mobility solutions that can reduce vehicle miles traveled, manage congestion, and provide multiple travel options along tolled corridors.

- Invest-6: Prioritize using new taxes and fees, including road usage charges, on state of good repair investments over expanding the system.
- Invest-7: Coordinate with the state, local governments, CARTA, and the public to ensure new sources of revenue avoid negatively impacting lower income and rural households. Where the collection of these revenues requires information about travel behavior or usage of roadways, ensure collection methods are sensitive to privacy concerns.
- Invest-8: Support local efforts to raise funding for priority investments that are consistent with the goals, strategies, and investments included in the regional Metropolitan Transportation Plan/Sustainable Communities Strategy (2025 Blueprint).
- Invest-9: Encourage and support public agencies to coordinate with SACOG when applying for federal and state grants and prioritize technical support for investments that are regional serving and aligned with the 2025 Blueprint, megaregion priorities, and funding program specific goals and requirements.

BUILD AND MAINTAIN A SAFE, EQUITABLE, AND RESILIENT MULTIMODAL TRANSPORTATION SYSTEM

- Build-1: Prioritize maintenance of existing transportation infrastructure to manage or reduce the growing maintenance funding gap by focusing flexible revenues, including SACOG's Regional Funding Round, on state of good repair improvements that support a safe, equitable, and resilient transportation system.
- Build-2: Strengthen the long-term fiscal health of transit by supporting transit providers in improving the productivity and cost effectiveness of transit service and supporting efforts for new sustainable sources of dedicated transit funding.
- Build-3: Focus roadway expansion funding on major bottlenecks that exist today and/or incentivizing development opportunities within Established and Center & Corridor Communities.
- Build-4: Support and help accelerate implementation of high-capacity transit and the Regional Transit Network to deliver responsive, fast, and reliable transit services cost-effectively, prioritizing communities with supportive land use policies.
- Build-5: Advance cost-effective safety improvements in high-crash locations to help the region make greater progress towards eliminating fatal transportation-related crashes.
- Build-6: Increase the resiliency of the multimodal transportation network and the emergency preparedness of the transportation sector to reduce the impacts of extreme weather and natural disasters.
- Build-7: Support investment in bicycle and pedestrian infrastructure that provides safe access to schools, jobs, recreational opportunities, social gathering centers, and transit, and implements the Regional Trail Network.
- Build-8: Develop multimodal corridors that improve access to major economic assets and job centers and facilitate the reliable movement of freight.

2.6 PLAN IMPLEMENTATION

The 2025 Blueprint is designed to achieve the regional SB 375 GHG target while prioritizing maintenance and rehabilitation of existing infrastructure and identifying investments that bring the most benefit to the regional transportation network. The 2025 Blueprint serves to implement SACOG's longstanding effort to integrate land use and transportation planning by tying the plan's performance to providing opportunities for less automotive travel and more opportunities for walking, bicycling, and transit use based on Blueprint-influenced land use patterns.

2.6.1 Development Pattern

As described above, the Development Pattern is the geographic delineation of community types. Within the Development Pattern, the regional growth pattern identifies where land use changes would occur. The proposed plan prioritizes growth in existing communities by applying a series of land use strategies to these select geographies to make individual parcels of land more attractive for both development and redevelopment. Many of the land use strategies are aimed at achieving the plan's focused growth strategy to comply with SB 375's GHG emissions reduction mandate. Other land use strategies are aimed at the affordability of the region's housing to address SB 375's other mandate to ensure that a mix of housing types are available to households of all income types across the region.

The 2025 Blueprint projects the development of an additional 30,233 acres of land, representing 1 percent of the region's total acreage. Table 2-1 provides a list of existing developed acres and forecasted developed acres by county.

Of the plan area's 30,233 new developed acres, 77 percent are within Placer and Sacramento counties, which are the most urbanized counties in the region in both 2020 and 2050. With implementation of the 2025 Blueprint, an additional 10,280 acres in Placer County and 12,960 acres in Sacramento County are projected to be developed between 2020 and 2050. As a result, the proportion of developed land in these counties would reach approximately 1 percent and 2 percent, respectively. Each of the other counties in the SACOG region are forecast to have between 7 percent (El Dorado County) and 4 percent (Sutter County) of the growth in the plan area through 2050. By 2050, less than 1 percent of the total area of each of these counties (i.e., El Dorado, Sutter, Yolo, and Yuba) would be developed.

Table 2-1 2025 Blueprint Regional Growth Pattern Development Projections by County

County (Incorporated and Unincorporated Areas)	Existing Developed Acres (2020) Acres	Existing Developed Acres (2020) Percent Distribution	Additional Developed Acres (2020-2050) Acres	Additional Developed Acres (2020-2050) Percent Distribution	All Developed Acres (2050) Acres	All Developed Acres (2050) Percent Distribution	All Acres (Developed and Undeveloped) All Acres	Development as Percent of All Acres (2050)
El Dorado	203,641	28%	2,264	7%	205,905	27%	1,000,145	0.2%
Placer	150,645	21%	10,280	34%	160,925	21%	839,878	1.2%
Sacramento	188,721	26%	12,960	43%	201,681	27%	586,432	2.2%
Sutter	11,086	2%	1,136	4%	12,222	2%	375,062	0.3%
Yolo	50,967	7%	1,871	6%	52,838	7%	639,742	0.3%
Yuba	115,323	16%	1,722	6%	117,046	16%	405,579	0.4%
Region Total	720,384	100%	30,233	100%	750,617	100%	3,846,837	0.8%

Notes: Excludes Agriculture, Open Space, Parks, Recreation, and Vacant land estimate (land that is forecast for development in the 2025 Blueprint but is available for development based on currently adopted general plans and specific plans.)

Source: SACOG May 2025.

Table 2-2, below, provides the existing number of dwelling units in the region by county in 2020 and 2050. As shown, although approximately 278,000 units are forecast to be constructed in the region over the 30-year period, the relative proportion of regional housing in each of the counties is anticipated to remain relatively constant. The majority of regional housing growth, approximately 80 percent, is projected to occur in Placer and Sacramento counties, which are anticipated to gain approximately 54,000 and 171,000 dwelling units, respectively. The remaining housing growth would occur in Yolo County (roughly 27,000 units or 10 percent of the total), and El Dorado, Sutter, and Yuba counties (each representing roughly 8,000 units or 3 percent of total regional growth).

Table 2-2 2025 Blueprint Housing Growth by County

County (Incorporated and Unincorporated Areas)	Total Dwelling Units[1] in 2020	2020 Percent of Total	Forecast Dwelling Units[1] in 2050	2050 Percent of Total	New Dwelling Units[1] between 2020 and 2050	Percent of Total Forecast Growth
El Dorado	67,050	7%	75,401	6%	8,351	3%
Placer	155,919	16%	210,369	17%	54,450	20%
Sacramento	584,194	61%	755,240	61%	171,046	62%
Sutter	34,732	4%	42,657	3%	7,925	3%
Yolo	80,060	8%	107,486	9%	27,426	10%
Yuba	29,660	3%	38,480	3%	8,820	3%
Region Total[1]	951,615	100%	1,229,633	100%	278,018	100%

[1] Percent of parts may not add to total due to rounding.

Source: SACOG May 2025.

Table 2-3, below, provides the existing number of employees in the region by county in 2020 and 2050. The region is forecast to add approximately 263,000 new jobs through the plan horizon. Similar to the housing units forecast above, the relative distribution of these new jobs is anticipated to follow existing trends, with the percentage of total employment in each county staying relatively stable. The employment growth is expected to mirror the distribution of new dwelling units, with the majority of regional growth (approximately 80 percent) in Placer and Sacramento counties combined; 10 percent of regional growth in Yolo County; and the remaining 10 percent of growth in El Dorado, Sutter, and Yuba counties combined.

Table 2-3 2025 Blueprint Employment Growth by County

County (Incorporated and Unincorporated Areas)	Employees in 2020	2020 Percent of Total	Employees in 2050	Percent of Total in 2050	New Employees between 2020 and 2050	Percent of Total Forecast Growth
El Dorado	51,574	5%	62,739	5%	11,165	4%
Placer	174,053	15%	237,127	17%	63,074	24%
Sacramento	729,535	65%	875,857	63%	146,322	56%
Sutter	35,180	3%	42,853	3%	7,673	3%
Yolo	113,300	10%	141,115	10%	27,815	11%
Yuba	23,907	2%	30,880	2%	6,973	3%
Region Total[1]	1,127,549	100%	1,390,571	100%	263,022	100%

[1] Percent of parts may not add to total due to rounding. Percent of parts may not add to total due to rounding. Percent of parts may not add to total due to rounding.

Source: SACOG MayMay 2025

SACOG's regional projections methodology identifies the total employment projected to occur in the region and the population that will occur in conjunction with that employment growth, taking into account net migration into the region, population growth within the region, and household formation. The new households are converted into housing unit demand. Based on the dwelling units and employment reported above, Table 2-4 provides the number of employees per dwelling unit by county and for the region in 2020 and 2050, and for the forecast growth. As noted above, the relative percentage of employees and dwelling units is anticipated to remain stable throughout the region over the planning period. The slight reduction in regional total employees per dwelling unit indicates that housing is projected to grow more than employment.

Table 2-4 2025 Blueprint Jobs to Housing Ratios by County

County (Incorporated and Unincorporated Areas)	2020 Employees per Dwelling Unit	2050 Employees per Dwelling Unit	Employees per Dwelling Unit for 2020-2050 Growth
El Dorado	0.8	0.8	1.3
Placer	1.1	1.1	1.2
Sacramento	1.2	1.2	0.9
Sutter	1.0	1.0	1.0
Yolo	1.4	1.3	1.0
Yuba	0.8	0.8	0.8
Region Total	1.2	1.0	0.9

Notes: The 2020-2050 growth column shows the ratio of new jobs to new households added to each county to result in the jobs-housing ratio at the end of the planning period.

Source: SACOG May 2025.

GROWTH DISTRIBUTION ACROSS COMMUNITY TYPES

Center and Corridor Communities

The compact and mixed-use character of land uses in Center and Corridor Communities helps reduce VMT by providing more opportunities for shorter trips by non-auto modes of travel. Center and Corridor Communities are more effectively served by transit, support potentially higher rates of walking and biking, and generate less vehicle travel. The 2025 Blueprint projects 39 percent of the growth in regional housing and 41 percent of growth in employment to occur in Center and Corridor Communities (Table 2-5). The corresponding development is anticipated to occur on 3,318 acres, which represents 11 percent of the new development in the 2025 Blueprint (Table 2-6).

Table 2-5 shows the number of dwelling units and employees in Center and Corridor Communities compared to other community types and Table 2-6 shows the acreage of new development by community type. Center and Corridor Communities are the most employment-oriented community type in the region (with 3.8 employees per dwelling unit in 2020). In 2050, these communities would continue to provide approximately 43 percent of the employment in the plan area. However, because the regional growth pattern projected in the plan would increase housing in the Center and Corridor Communities, the percentage of regional housing provided would increase from 13 to 19 percent of the regional total. Although these communities would remain the most employment-oriented community type; 2.5 employees per dwelling unit are anticipated in 2050. As shown in Table 2-7, new housing in Center and Corridor Communities is predominantly (85 percent) attached product, due to higher residential densities proposed or allowed in these areas by local jurisdictions.

In addition, a variety of transportation improvements are planned in this community type, including new transit, infrastructure for non-motorized travel, and roadway projects, as well as ongoing investments in transit operations and roadway maintenance. New and expanded bus and rail transit, and complete streets are planned that serve supportive land uses with higher density and a mix of uses most likely to generate a mix of travel modes. Road and highway projects concentrate on alleviating major bottlenecks and congestion points. Blueprint-supportive programs and transportation systems management strategies, including technology and demand management programs, would allow for greater optimization of existing transportation infrastructure in the Center and Corridor Communities.

Table 2-5 2025 Blueprint Housing and Employment Growth by Community Type

Community Type	Existing Dwelling Units in 2020	Percent of Total Dwelling Units in 2020	Existing Employees in 2020	Percent of Total Employees in 2020	Dwelling Units in 2050	Percent of Total Dwelling Units in 2050	Employees in 2050	Percent of Total Employees in 2050	New Dwelling Units between 2020 and 2050	Percent of Total New Dwelling Units between 2020 and 2050	New Employees between 2020 and 2050	Percent of Total New Employees between 2020 and 2050
Center and Corridor Communities	126,637	13%	490,225	43%	236,785	19%	597,446	43%	110,148	39%	107,221	41%
Established Communities	718,086	75%	580,406	51%	794,319	65%	682,309	49%	76,233	27%	101,903	39%
Developing Communities	23,766	3%	15,268	1%	112,522	9%	67,894	5%	88,756	32%	52,626	20%
Rural Residential Communities	82,036	9%	37,326	3%	84,917	7%	38,573	3%	2,881	1%	1,247	<1%
Lands Not Identified for Development in the 2025 Blueprint	1,090	<1%	4,324	<1%	1,090	<1%	4,324	<1%	0	0%	0	0%
Region Total	951,615	100%	1,127,549	100%	1,229,633	100%	1,390,546	100%	278,018	100%	269,997	100%

Notes: Percent of parts may not add to total due to rounding.

Source: data compiled by SACOG in 2025.

Table 2-6 2025 Blueprint Developed Acres by Community Type

Community Type	Existing Developed Acres in 2020	Percent of Total Existing Developed Acres in 2020	Additional Developed Acres between 2020 and 2050	Percent of Total Additional Developed Acres between 2020 and 2050	Developed Acres in 2050	Percent of Total Developed Acres in 2050	Total Acres (Developed and Undeveloped)	New Developed Acres as Percent of Total Acres (Developed and Undeveloped) in 2050
Center and Corridor Communities	29,955	4%	3,318	11%	33,273	4%	41,526	8%
Established Communities	224,073	31%	10,084	33%	234,157	31%	325,466	3%
Developing Communities	15,667	2%	13,093	43%	28,760	4%	89,570	15%
Rural Residential Communities	275,193	38%	3,737	12%	278,931	37%	535,475	1%
Agricultural and Natural Lands	175,496	24%	0	0%	175,496	23%	2,854,802	0%
Region Total	720,384	100%	30,232	100%	750,617	100%	3,846,839	1%

Notes: Percent of parts may not add to total due to rounding.

Source: SACOG May 2025.

Table 2-7 2025 Blueprint New Housing Product Distribution by Community Type

Community Type	Rural Residential[1]	Large-Lot Single-Family[2]	Small-Lot Single Family[3]	Attached[4]	Total[5]
Center and Corridor Communities	0%	1%	12%	87%	100%
Established Communities	1%	22%	40%	38%	100%
Developing Communities	1%	46%	30%	23%	100%
Rural Residential Communities	91%	6%	3%	0%	100%
Region Total	1%	21%	25%	52%	100%

[1] Rural Residential: single-family detached homes built at densities less than 1 dwelling unit per acre.

[2] Large-Lot Single-Family: single-family detached homes built at densities between 1 and 8 dwelling units per acre.

[3] Small-Lot Single-Family: single-family detached homes built at densities between 8 and 25 dwelling units per acre.

[4] Attached Residential: Single-family or multi-family homes ranging from duplexes, triplexes, apartments, condominiums, townhomes, row houses, halfplexes, etc. built at densities from 8 to over 50 dwelling units per acre.

[5] Percent of parts may not add to total due to rounding.

Source: SACOG May 2025

Established Communities

Established Communities contain the existing residential neighborhoods, office parks, industrial parks, and shopping centers of the region. The 2025 Blueprint forecasts 27 percent of the projected housing growth and 39 percent of employment growth within Established Communities between baseline and the 2050 plan horizon (Table 2-5). This represents 33 percent of the new development land in the 2025 Blueprint (Table 2-6). Established Communities are largely developed, but are generally not as dense as Center and Corridor Communities. As shown in Table 2-5, the housing units in Established Communities would increase by approximately 76,233 but decrease in proportional share

from 75 percent to 65 percent of the regional total. Employment growth is anticipated to experience a smaller change in proportional shares, with jobs increasing by about 101,903 (39 percent of regional growth).

The modest rate of housing growth in Established Communities is due in part to their substantially "built out" condition, but also because much of the potential housing demand in these areas that might otherwise be realized through amended plans and codes to allow higher densities is channeled to the Center and Corridor Communities in the plan. Employment growth in Established Communities is higher than housing growth because the 2025 Blueprint projects improved employment-to-housing ratios in communities with a low employment base today, and continued build out of existing office and industrial parks in regional jobs centers. New housing in Established Communities is fairly balanced between large-lot single-family, small-lot single-family, and attached products, as shown in Table 2-7.

The type of growth in Established Communities takes advantage of existing transportation infrastructure and surrounding land uses. However, a variety of transportation improvements are planned by 2050 including new transit, non-motorized and roadway projects, and ongoing investments in transit operations and roadway maintenance. Established Communities would receive new and expanded bus and rail transit, and complete streets that serve supportive land uses with higher density and a mix of uses most likely to generate a mix of travel modes. Road and highway projects are identified to alleviate major bottlenecks and congestion points along major arterials and freeways leading to and from major employment centers in Sacramento, Rancho Cordova, and Roseville. Blueprint supportive programs and system management strategies, including technology and demand management programs, would allow for greater optimization of existing transportation infrastructure.

Developing Communities

The 2025 Blueprint forecasts that 32 percent of the new housing and 20 percent of new employment would occur in Developing Communities (Table 2-5). This represents 43 percent of the newly developed land in the 2025 Blueprint (Table 2-6). Unlike Established Communities, which would experience high employment growth relative to housing growth, Developing Communities would experience high housing growth relative to employment growth. This is due to two factors: (1) most Developing Communities in the 2025 Blueprint are not expected to fully build out by the horizon year of the plan and, therefore, a critical mass of housing will not yet be present to support planned employment growth; and (2) most Developing Communities are located around regional jobs centers in southwest Placer County, southeastern Sacramento County, and urbanized Yolo County, and are intended to provide nearby housing for those jobs centers. New housing in Developing Communities would be predominantly large-lot single-family and small-lot single-family products, as shown in Table 2-7.

Transportation projects in Developing Communities would include road widening projects and newly constructed road projects to serve the new residential and employment developments.

Rural Residential Communities

Rural Residential Communities are very low-density communities with mostly residential development and some small-scale farming. These communities are expected to have very limited growth by 2050; they expected to increase by about 3,372 housing units and 1,210 jobs. This development would occur on an estimated 3,737 acres. This community type is expected to have the lowest rate of growth and will have a decreasing share of regional population, housing units, and employment.

The 2025 Blueprint forecasts that 1 percent of the new housing and 0.5 percent of new employment will occur in Rural Residential Communities. The majority of growth in Rural Residential Communities would be located in the foothills of El Dorado, Placer, and Yuba counties. New housing in Rural Residential Communities would be almost entirely rural residential and large-lot single-family housing product, as shown in Table 2-7.

While the land uses in Rural Residential Communities would be largely unchanged with implementation of the 2025 Blueprint, these communities benefit from changes in adjacent Developing Communities and Established Communities that bring important destinations closer and reduce the need to travel long distances on a regular basis. Existing transportation infrastructure in Rural Residential Communities consists primarily of roads serving automobile traffic with limited transit service in a few places in the plan area. Implementation of the 2025 Blueprint would result in the construction of roadway improvements, with the focus on road maintenance and rehabilitation, safety projects

and limited new or widened roadways or freeway improvements. Road projects in Rural Residential Communities focus on improving agricultural and goods movement travel, as well as improving or maintaining accessibility for slow moving farm equipment. Rural Residential Communities also benefit from improvements to lifeline and rural transit services that focus on bringing workers to job sites and provide access to crucial destinations such as hospitals, social services, and shopping. A number of road safety improvements, such as the addition of shoulders, guardrails to highways, rumble strips, intersection signalizations, or restriping in Rural Residential Communities create a safer environment for pedestrians and bicyclists.

GROWTH DISTRIBUTION ACROSS HOUSING TYPES

The 2025 Blueprint assumes a housing product type split that continues a trend towards more attached and small lot single family housing types, with attached homes making up 36 percent of all homes in 2050 (see Table 2-8 below). This necessitates a higher proportion of new attached units than recent history in the SACOG region, but still less than the state average.

Table 2-8 Housing Product Type Split

	Rural Residential	Large Lot Single Family	Small Lot Single Family	Attached
Existing (2020)	8%	31%	34%	27%
2025 Blueprint (2050 End State)	6%	29%	32%	33%

Source: Provided by SACOG in 2025.

GROWTH DISTRIBUTION BY HIGH FREQUENCY TRANSIT AREAS

A primary goal of the 2025 Blueprint is to increase the number of people – both residents and employees – who have access to high-quality transit. High Frequency Transit Areas are areas of the region within 0.5-mile of a major transit stop (existing or planned light rail, street car, or train station) or high-quality transit corridor. A high-quality transit corridor is a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours (PRC Section 21155). The projected land use pattern in HFTAs, together with the planned transportation improvements, accommodate growth while reducing the need to travel frequently or over long distances using single occupancy vehicles through compact land use patterns that locate people closer to jobs and other destinations. These areas are more effectively served by transit, support potentially higher rates of walking and biking, and generate less vehicle travel.

Of the six counties in the region, Placer, Sacramento, and Yolo provide HFTAs. The HFTAs in the plan area are shown in Figure 2-3. By 2050, the 2025 Blueprint forecasts that to an additional 153,644 dwelling units and 151,984 employees would be located in areas with high-quality transit service (see Table 2-9). This growth would result in the disturbance of an estimated 7,649 acres in the plan area (see Table 2-10).

Table 2-9 2025 Blueprint Housing and Employment within High Frequency Transit Areas

High Frequency Transit Areas [1]	Existing Dwelling Units in 2020	Existing Employees in 2020	New Dwelling Units between 2020 and 2050	New Employees between 2020 and 2050	All Dwelling Units in 2050	All Employees in 2050
Placer County HFTAs	45,197	90,433	24,686	39,717	69,883	130,150
Sacramento County HFTAs	385,082	525,442	114,670	99,954	499,752	625,396
Yolo County HFTAs	42,094	60,680	14,288	12,313	56,382	72,993
All Plan Area HFTAs	472,373	676,555	153,644	151,984	626,017	828,539

Source: SACOG, MayMay 2025.

Placer High Frequency Transit Areas

The Placer HFTAs cover Capital Corridor train station areas in the cities of Roseville, Rocklin, and Auburn, as well as high-quality bus routes in the city of Roseville. These systems are connected to the larger regional transit network, making the Placer HFTAs very accessible regional destinations. Placer County HFTAs are anticipated to experience a 55 percent growth in housing units and a 44 percent growth in employees through the plan horizon.

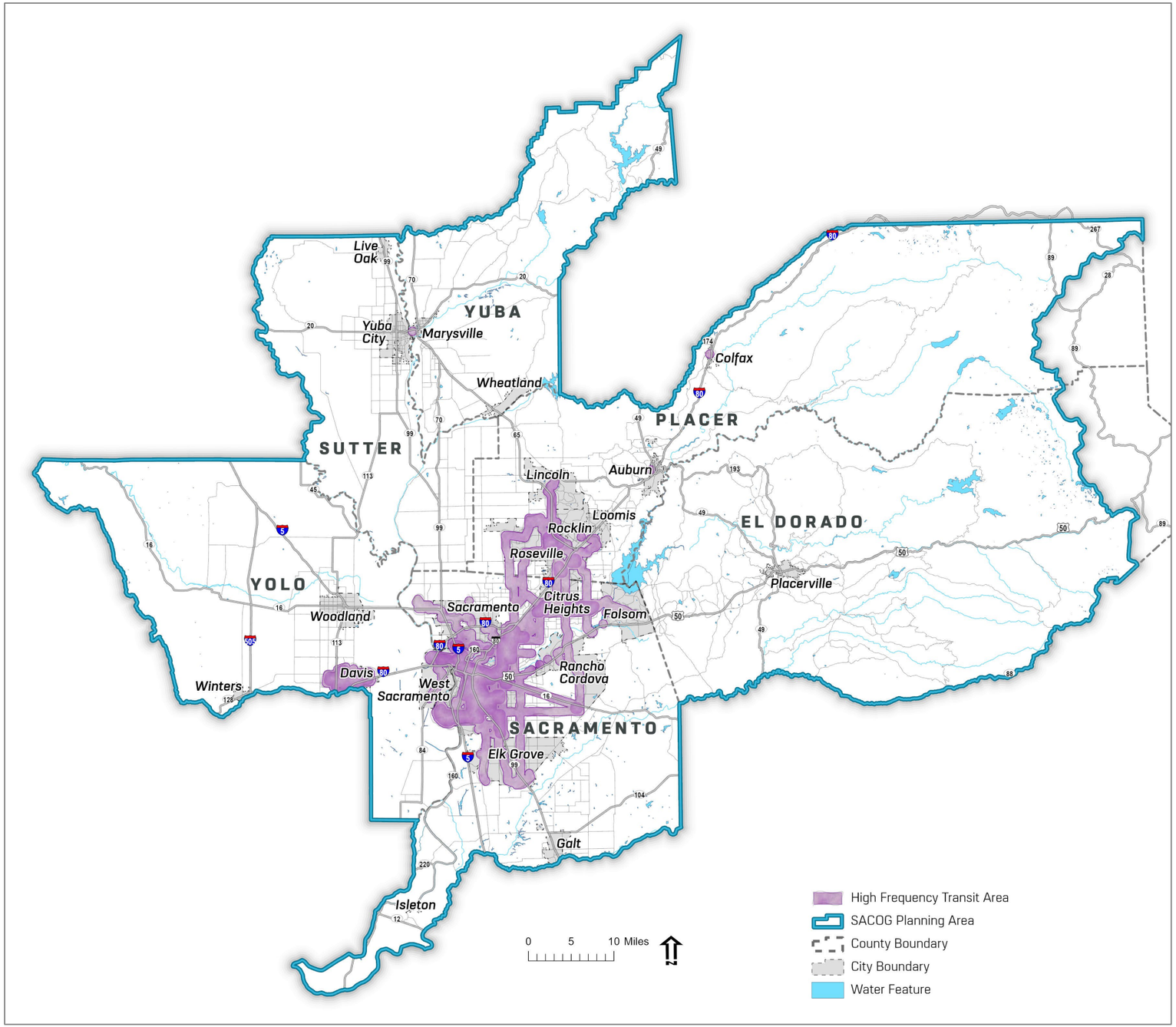
Proposed transportation improvements in the Placer County HFTAs include new transit, non-motorized and roadway projects, and ongoing investments in transit operations and roadway maintenance. Transit service will include increased frequency on local fixed route buses, but the majority of transit service increases will be commuter service to downtown Sacramento. The sum of the investments creates more efficient travel, as well as opportunities for non-auto modes of travel.

Table 2-10 2025 Blueprint Acreage of Development in High Frequency Transit Areas

High Frequency Transit Areas	Existing Developed Acres in 2020	Percent of Existing Developed Area in 2020	Developed Acres in 2050	Percent of Total Developed Acres in 2050	Additional Developed Acres between 2020 and 2050	Percent of Additional Developed Acres between 2020 and 2050	All Acres (Developed and Undeveloped)	New Development as Percent of All Acres
Placer HFTAs	13,734	13%	15,738	14%	2,003	26%	22,310	9%
Sacramento HFTAs	81,347	78%	86,471	77%	5,124	67%	104,662	5%
Yolo HFTAs	9,047	9%	9,569	9%	522	7%	13,717	4%
All HFTAs	104,128	100%	111,777	100%	7,649	100%	140,689	5%

Notes: Percent of parts may not add to total due to rounding

Source: SACOG, May 2025.



Source: Prepared by SACOG in 2025

Figure 2-3 HFTAs in the Plan Area

Sacramento High Frequency Transit Areas

The Sacramento HFTAs cover several types of transit routes: light rail station areas within the cities of Folsom, Rancho Cordova, Sacramento, and unincorporated Sacramento County; a Capital Corridor train station area in the City of Sacramento; a transit corridor in the central/downtown area of the City of Sacramento, and numerous bus and bus rapid transit routes in the cities of Citrus Heights, Rancho Cordova, Sacramento, and unincorporated Sacramento County. The 2025 Blueprint projects 30 percent of regional housing and 19 percent of regional employment growth to occur in the Sacramento HFTAs. The Sacramento County HFTAs will include approximately 114,670 new housing units and 99,954 new jobs. This new development occupies 5,124 acres, or 5 percent of the total land area within the Sacramento HFTAs.

New development in the Sacramento HFTAs is fairly balanced between housing and employment growth due in part to the extensive geographic coverage of the HFTAs, which cover regional job centers (e.g., downtown Sacramento and Rancho Cordova) as well as residential areas and commercial areas. In Sacramento County in particular, most of the cities and the unincorporated county have initiated commercial corridor plans intended to allow significantly more residential development than allowed under past land use plans.

A variety of transportation improvements are planned by 2050 including new transit, non-motorized and roadway projects, and ongoing investments in transit operations and roadway maintenance. Transit service would include increased frequency on local fixed route buses, major increases in light rail service, new fixed guideway service, and more express bus service.

Yolo High Frequency Transit Areas

The Yolo HFTAs include the majority of West Sacramento and Davis, and those portions of Yolo County adjacent to the city limits of Davis that fall within 0.5 mile of a high-quality bus route. The Yolo HFTAs cover a Capital Corridor train station in the City of Davis, a transit corridor in the central area of West Sacramento, and numerous bus and bus rapid transit routes in the cities of Davis and West Sacramento. Yolo County HFTAs would include approximately 14,288 new housing units and 12,313 new jobs. This new development would occur on 522 acres, or 7 percent of the total land area within the Yolo HFTAs. New development in the Yolo HFTAs would be fairly balanced between housing and employment growth due in part to the geographic coverage of the HFTAs, which include regional job centers (e.g., central West Sacramento and UC Davis), as well as residential areas and commercial areas.

A variety of transportation improvements are planned in the Yolo HFTAs, including new transit and roadway projects, and ongoing investments in transit operations and roadway maintenance. Transit service would include increased frequency on local fixed route buses, new fixed guideway transit service in West Sacramento, and increased express service to downtown Sacramento.

2.6.2 Transportation Network Improvements and Programs

The 2025 Blueprint includes improvements to existing facilities such as road widenings, intersection or interchange improvements, intelligent transportation system upgrades, turn pockets, high-occupancy vehicle lanes, auxiliary and transition lanes, and other improvements. The remainder of the budget would pay for new road and highway facilities such as roads serving new development or high-growth areas, new interchanges, road extensions, and new river crossings to connect development across the region's major rivers. Other planned transportation improvements include improvements to the existing transit system and some expansion of rail, and bicycle path improvements.

With respect to transportation projects proposed as a part of the 2025 Blueprint, the plan includes 702 new lane miles of highways, arterials, and expressways to meet the priorities to build vibrant places, provide mobility solutions, and maintain a resilient transportation system for the plan area (see Table 2-11). The 2025 Blueprint includes 117 miles of freeway high-occupancy vehicle lanes, which are intended to preserve faster, more reliable travel options for travelers when needed; to raise revenue to offset costs of building, maintaining, and operating the facilities; and to provide subsidies for non-auto options like express buses in the corridors. The 2025 Blueprint also provides maintenance, major reconstruction, and rehabilitation activities on the existing road and highway network.

Figure 2-4 illustrates the existing transportation network and Figure 2-5 shows the transportation network in 2050 following implementation of the plan.

Table 2-21 2025 Blueprint Transportation System Changes by Facility Type

	2020 Total	2050 Total	Change between 2020 and 2050	Percent Change Between 2020 and 2050
General Purpose Freeways (lane miles)	1,684	1,696	12	1%
Freeway High-Occupancy Vehicle/High-Occupancy Toll Lane (lane miles)	130	247	117	90%
Freeway Auxiliary Lanes/Ramps Lane (lane miles)	238	311	74	31%
Arterial Roadways /Expressway (lane miles)[1]	4,145	4,835	690	17%
Collector and Local Streets (lane miles)[2]	22,249	25,520	3,271	15%
Class I Bike Routes (route miles)[3]	480	1,046	566	118%
Bicycle Class II Routes (route miles)[3]	1,589	2,447	858	54%
Transit Service (total daily vehicle service hours)[4]	3,022	9,413	6,391	211%
Local Rail Route Miles	42	44	2	6%

[1] "Arterial / Expressway Streets" include all surface streets with functional class minor arterial or higher, including arterial streets, expressways, rural highways, etc. 2020 quantities are from Highway Performance Monitoring System (HPMS); 2050 quantities are estimates from SACOG regional travel demand model networks.

[2] "Collector and Local Streets" are below minor arterial in functional class. 2020 quantities are from HPMS; 2050 quantities are based on applying per-capita rates to population growth by community type.

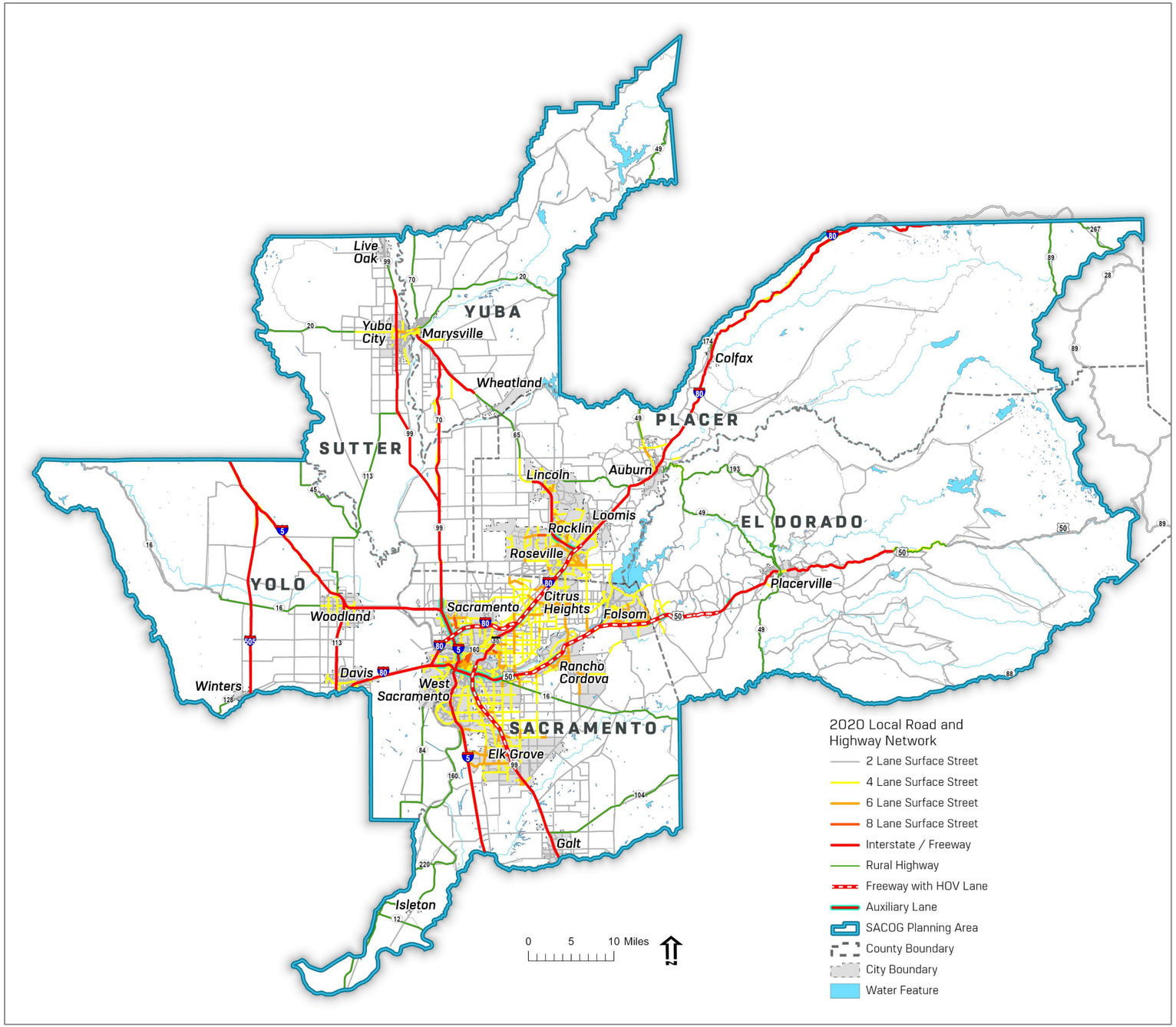
[3] Bicycle route mileage based on SACOG GIS centerline data for 2020 and estimates of growth in mileage based on adopted bikeway master plans.

[4] One vehicle service hour = one transit vehicle operating for normal revenue service for one hour. All quantities estimated from SACOG regional travel demand model networks.

Source: Provided by SACOG in 2025.

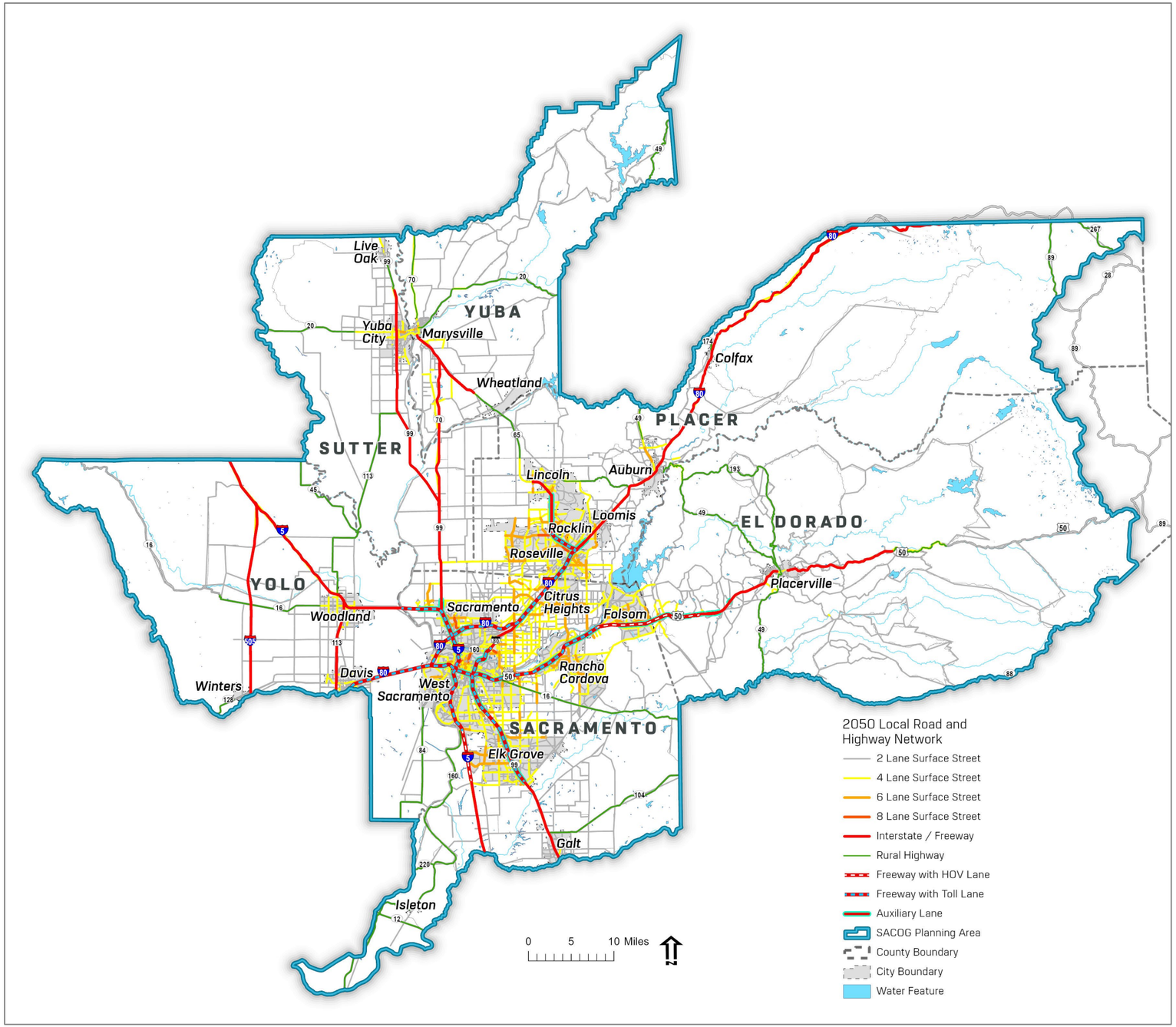
The list of transportation projects included in the plan was developed by SACOG to strike a balance between a transportation network that will efficiently serve the projected regional growth for the plan area, manage congestion, provide transportation choice to residents, improve safety, and provide the best path for achieving the policy goals in the 2025 Blueprint and the GHG emissions target. A list of multimodal transportation investments was developed to support the Development Pattern. The Transportation Project List, included as Appendix A to the 2025 Blueprint, was adopted by the board on November 14, 2024. It includes the following allocation of funding across major project categories:

- Maintenance and Rehabilitation: $13.0 billion
- Road and Highway Capacity: $7.6 billion
- Transit Improvements:
  - Transit Capital: $7.9 billion
  - Transit Operations and Maintenance: $7.0 billion
- Bike and Pedestrian Improvements: $2.0 billion
- Programs, Safety, System Management, and Operations: $3.4 billion



Source: Prepared by SACOG in 2025.

Figure 2-4 Existing (2020) Transit Network



Source: Prepared by SACOG in 2025.

Figure 2-5 Planned (2050) Transit Network

Rooted in the assumption that the 2025 Blueprint needs to achieve the regional SB 375 GHG target, and that maintenance and rehabilitation needs are a high priority in the region, these transportation investments add targeted capacity to the system. Specifically, the road and highway capacity projects are intended to serve the jobs and housing growth projected within the plan. Projects were reviewed for their potential to provide multimodal benefits, improve safety, alleviate existing or forecasted bottlenecks, connect housing to jobs, and meet future projected travel volumes in a way that manages, rather than eliminates, congestion.

Funding for the transportation projects comes from a variety of federal, state, and local sources that get distributed in several ways (e.g., grants, direct subventions). About two-thirds of the funding in the 2025 Blueprint would come from locally controlled funding sources (e.g., developer fees, sales taxes, gas tax subventions from the state, transit fare revenues, and various other assessments). SACOG would directly manage around 7 percent of the total funding in the 2025 Blueprint through regional funding programs that include both federal and state funds.

Each type of transportation project is described in greater detail below.

ROAD MAINTENANCE AND REHABILITATION

The plan area covers nearly 25 thousand lane miles of existing or new collector and local streets, over 7,000 lane miles of freeway, high-occupancy vehicle, auxiliary, expressway, and arterials, and numerous small and large bridges that must be kept in a good state of repair for the transportation system to operate efficiently. The maintenance and rehabilitation budget includes funds to preserve, maintain, and rehabilitate the region's roads, highways, bridges, trails, sidewalks, and other bicycle and pedestrian facilities. The 2025 Blueprint prioritizes funding for preserving existing assets and reducing maintenance backlogs.

Many road maintenance or rehabilitation projects present opportunities to improve the travel experience of bicyclists and pedestrians. In addition to the direct investments assumed for the bicycle and pedestrian budget, discussed below, SACOG assumes that when appropriate and feasible, maintenance projects will include bicycle and pedestrian components such as striping and signage, sidewalk gap closures, ADA retrofits, and intersection improvements.

The plan includes investment in complete streets along urban corridors, as well as complete corridor treatments in rural communities, where closing a shoulder gap or improving a county road intersection can improve the safety of travel for all modes.

Typical road maintenance and rehabilitation projects include:

- Routine and preventive maintenance projects intended to extend the life of roads and highways, including sealing cracks, repairing pavement, cleaning and repairing drains, fixing signals, and sweeping streets
- More extensive repair, rehabilitation, and reconstruction of roadways, including sealing pavement, repaving, reconstructing subgrade and drainage, and reconfiguring intersections
- Bicycle, pedestrian, safety and aesthetic improvements, such as striping, curb ramps, sidewalk gap closures, rail crossings, and landscaping as part of larger rehabilitation projects
- Replacement, rehabilitation, painting, scour countermeasures, and bridge approach barrier and railing replacements on local and state-owned bridges

ROAD AND HIGHWAY CAPACITY

The 2025 Blueprint investment package focuses on cost-effective and strategic capacity projects. Right-sizing, or value-engineering, of roadway investments for maximum cost-effectiveness is an important component of an MTP/SCS that achieves strong performance benefits with lower funding levels. The 2025 Blueprint roadway investments emphasize access to infill development areas, congestion relief, support for bus and rail transit, and improved bicycle and pedestrian access. Local road investments increase capacity for local passenger travel, creating a benefit to goods movement on highways. Most of the added freeway lane miles are attributable to carpool, auxiliary, and transition lane additions that occur in the urbanized part of the region and are directed at closing gaps

that relieve congestion along major commute corridors during peak commute periods and to serve suburban job centers where it will take time to build up employment densities to the point that transit becomes a serious option for commuting.

Typical road and highway capacity projects include:

- Major Local Road Improvements
  - Placer Parkway- New four-lane divided facility from State Route (SR) 65 to Watt Avenue; Interchange at SR 65 Whitney Ranch; at-grade crossings at Fiddyment, Foothills, and Watt
  - Capital Southeast Connector- New four lane connector along White Rock and Grant Line Road from US 50 in El Dorado County to Douglas Road in Sacramento County, continuing with four lanes on Grant line from Bradshaw Road to Kammerer Road
  - Road, bicycle, and pedestrian improvements serving the Railyards Specific Plan Area in downtown Sacramento
  - Kammerer Road widening and extension in Elk Grove
- State Highway Improvements
  - US 50- New carpool lanes, Watt Avenue to downtown Sacramento
  - US 50-Modified interchange operational improvements at US 50 & SR 99, US 50, and Interstate (I-) 5
  - US 50-New auxiliary lanes, transition lanes, and interchange improvements in various locations in Sacramento, Rancho Cordova, and Folsom
  - I-80 and I-5- New carpool lanes on I-80 and US 50 connecting Davis to Downtown Sacramento, with new bike bridge across the Yolo Causeway
  - I-80- Business 80/Capital City freeway capacity and operational improvements
  - I-80/US 50 Managed Lanes from Solano County to the City of Sacramento
  - I-80/SR 65 interchange improvements
  - SR 65- Operational improvements in Marysville through area where SRs 20, 65, and 70 come together
  - SR 65- Capacity and operational improvements from Galleria Boulevard to Lincoln Boulevard
  - SR 99/SR 70- Operational improvements between I-5 and Placer Parkway
  - SR 70- widen shoulders and improve clear recovery zone and passing lanes in both directions from Laurellen Road to Butte County Line
  - State Route 51 (Capital City) Corridor Improvements including widening the American River bridge, extending bus/carpool lanes, adding a new class 1 bike path, and auxiliary/transition lanes
  - Construction of managed lane facility from the I-5/I-80 Interchange to downtown Sacramento
- Bridges
  - I Street Bridge replacement between Sacramento and West Sacramento
  - New Broadway Bridge connecting Sacramento and West Sacramento
  - New all-modal river crossing between Downtown and Natomas
  - One-to-two and two-to-four lane widenings on a number of small creek crossings
  - Bicycle and pedestrian retrofits on existing and new bridges

TRANSIT IMPROVEMENTS

The 2025 Blueprint provides funding to support operating and maintaining the transit system, as well as capital expenses such as purchasing new buses and rail vehicles, infrastructure associated with adding routes and stations to the bus and rail system, building new storage and maintenance facilities, and improvements to help buses move more quickly through traffic. The types of transit offered in the plan vary by areas of the region. Investments include increasing the amount of service on existing routes, introducing new services, and adding high-capacity rail to high-demand corridors. Figures 2-6 and 2-7 illustrate the transit network and services in 2020 and included in the 2025 Blueprint by 2050.

Typical transit improvement projects include:

- Fixed Guideway
  - Enhanced bus and bus rapid transit from Township 9 to Sacramento International Airport
  - Sacramento to Roseville third main track from Sacramento Valley Station to the Placer County line
  - Sacramento-West Sacramento Downtown/Riverfront Transit Project
  - Auburn to Donner Summit track improvements including double tracking, addition of crossovers, notching of tunnels, reactivation, and replacement of second mainline track between Auburn and Reno, Nevada
- Local and Express Buses and Neighborhood Shuttles
  - Increase bus service with 15 minute or better service from roughly 5 percent of routes in 2020 to over 25 percent of all routes in 2050. Options range from increasing the amount of service on existing fixed route and express bus lines to introducing new services including Bus Rapid Transit lines and microtransit options
  - Expansion of ADA paratransit services to keep up with the fast-growing senior population
  - Various street and operational improvements coordinated with complete streets corridor enhancements to enhance bus transit
  - New rolling stock (bus and light rail vehicles) to replace aging vehicles on existing and expanded routes

BICYCLE AND PEDESTRIAN INVESTMENTS

In addition to "complete street" investments described earlier, the 2025 Blueprint includes direct investments for bicycle and pedestrian facilities, such as new shared-use paths and trails. The goal is to develop a connected system of facilities that provide safe and convenient bicycle and pedestrian travel throughout the region. The development of the regional network is oriented towards utilitarian trips and emphasizes connectivity to current facilities and connections to transit systems and key destinations. Figures 2-8 and 2-9 illustrate the extent of class I and class II bicycle facilities throughout the plan area.

Typical bicycle and pedestrian improvements include:

- Pedestrian bridges and pedestrian intersection improvements that include ADA-compatible ramps, bulb-outs, and special crossing signals
- Bike lanes on more neighborhood and major streets
- Multi-use bike/pedestrian trails (off-street, grade-separated) that offer residents the opportunity to make utilitarian and leisure trips separated from vehicular traffic
- Sacramento Central City Specific Plan Multi-Modal Improvements including two-way conversions, three-to-two lane conversions, freeway ramps, and buffered bike lanes
- River District Specific Plan bikeway and pedestrian improvements

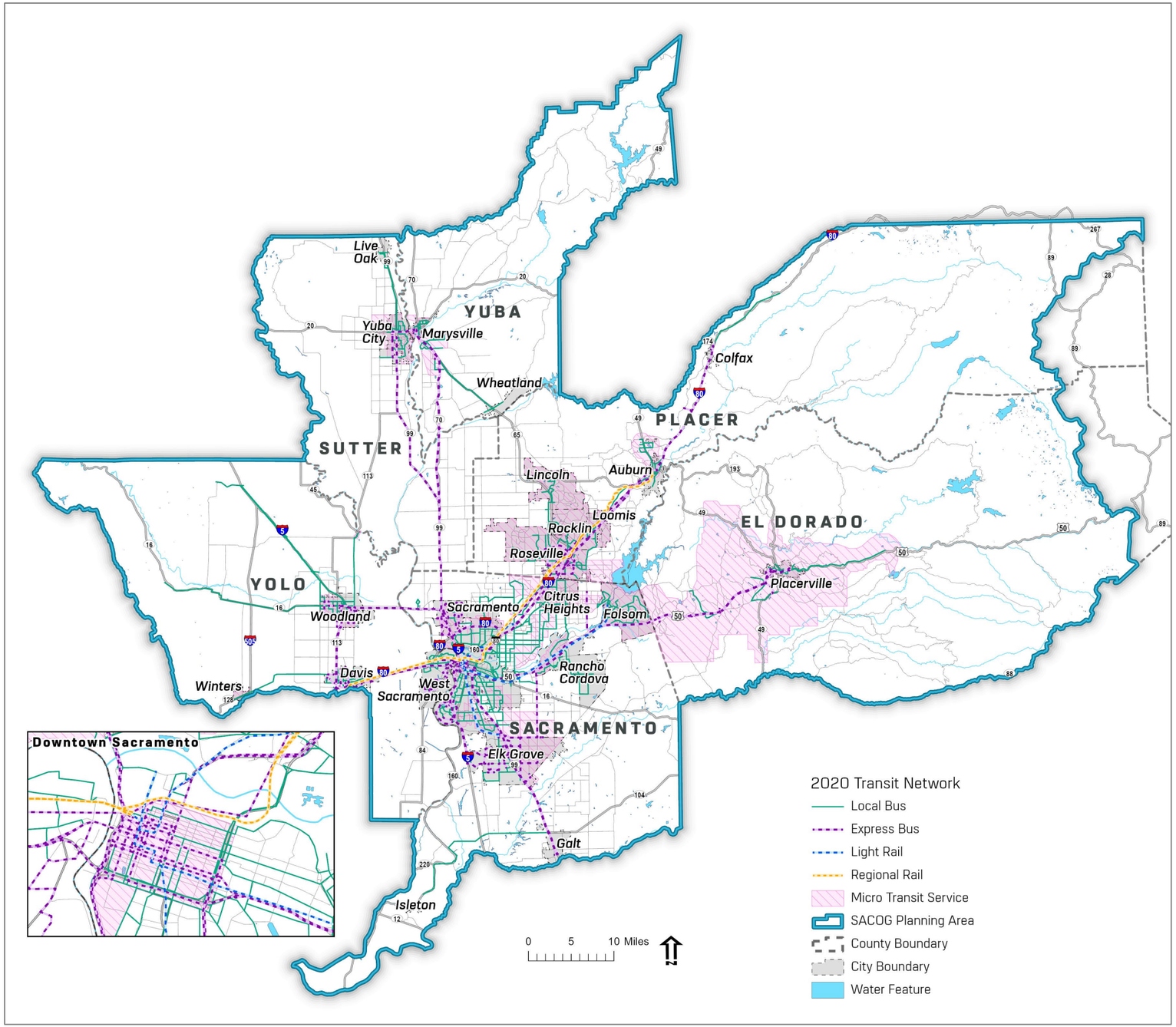
- Emphasis on complete street connections within and between cities, areas of pedestrian-scale development, and to transit and school facilities
- Bike facilities (racks, lockers, restrooms) at major transit stops/hubs (light rail, BRT, etc.) and at key activity centers (downtown Sacramento, shopping malls, large office complexes, etc.)

PROGRAMS, SAFETY, SYSTEM MANAGEMENT, AND OPERATIONS

The 2025 Blueprint also includes funding for supplementary programs, planning, and operational efforts.

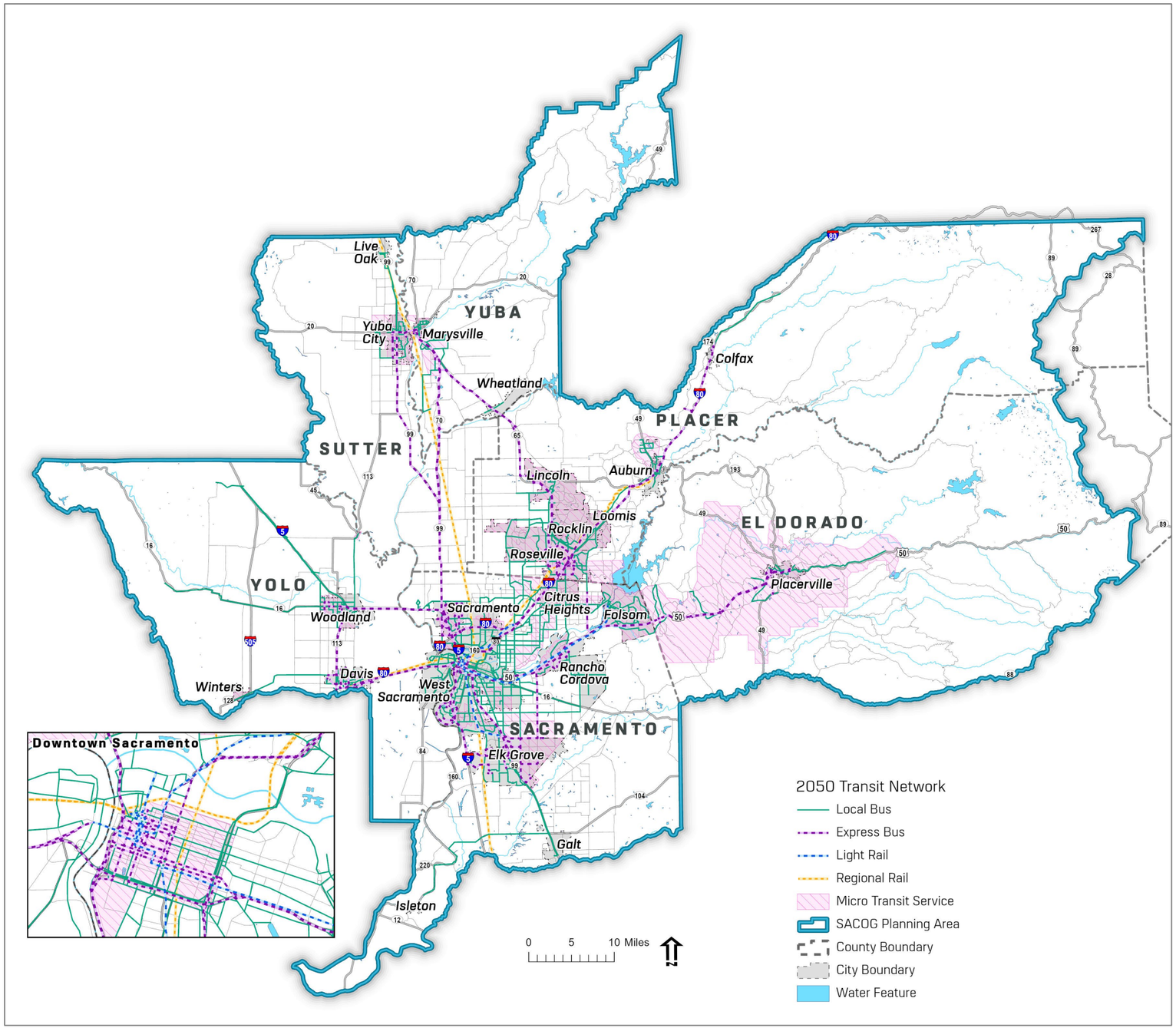
Typical programs, safety, system management, and operation projects include:

- Green Means Go: A multi-year pilot program to lower GHG emissions in the plan area by accelerating infill development, reducing vehicle trips, and electrifying remaining trips
- Community Design: Seed funding to encourage smart-growth development projects
- Air Quality Improvement Programs: Continued funding of Transportation Control Measures including the Sacramento Emergency Clean Air and Transportation grant program for replacing or retrofitting diesel engines and trucks and Spare the Air programs to reduce VMT on bad air days
- Intelligent Transportation Systems: Anticipated investments include automated message signs, crosswalk signals with pedestrian countdown timers, real-time transit message signs, and transit signal priority for buses
- Travel Demand Management: Continued funding of programs implemented by Transportation Management Associations; promotional campaigns including May is Bike Month and rideshare matching services, and other projects that provide education, incentives, or information to help residents choose transportation modes other than driving alone
- 511 Traveler Information: Develop this existing phone and web-based service as a more highly developed and user-friendly source of detailed travel information
- Community Enhancements: Funding for investments, including soundwalls, traffic calming, and streetscaping features, which can make a corridor or intersection more attractive while also improving its safety and operation
- Project Development Support: Funding for projects outside of the planning period to begin early stages of development, including project design, preliminary engineering, environmental clearance, and right-of-way acquisition (due to limited revenues in the financially constrained 2025 Blueprint, these projects are not anticipated to have sufficient funding to complete construction during the planning period)



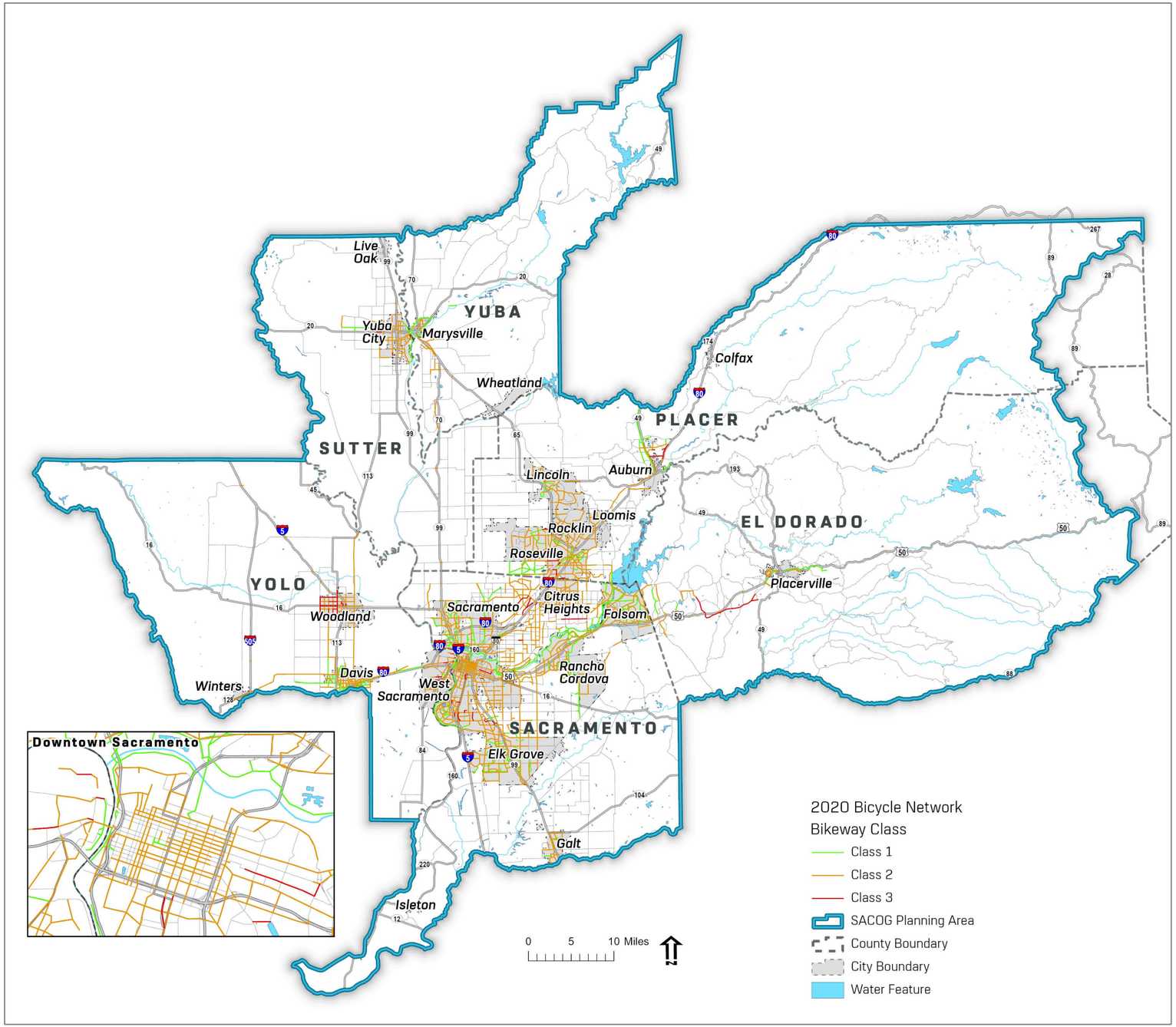
Source: Prepared by SACOG in 2025

Figure 2-6 Existing (2020) Transportation Network



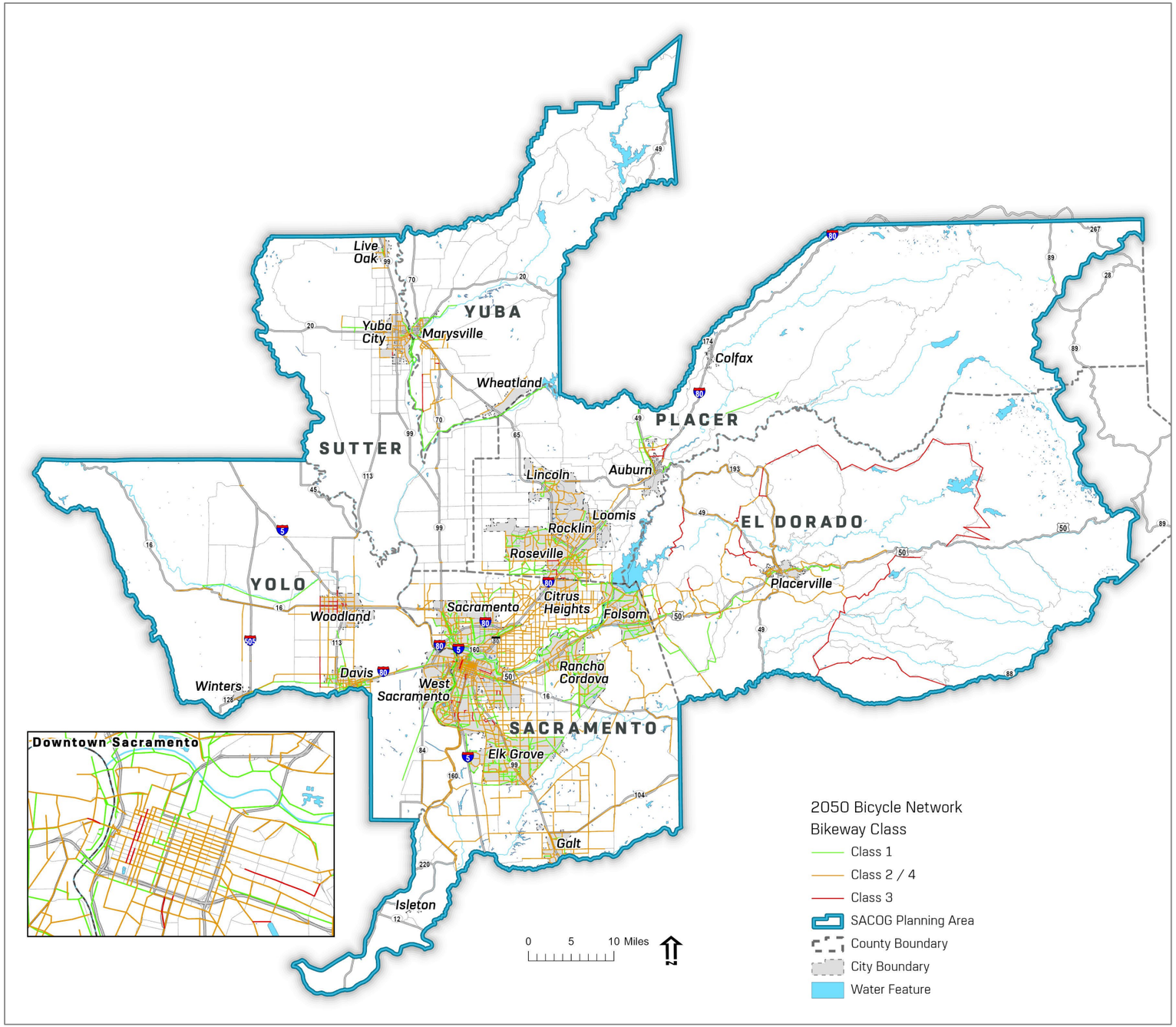
Source: Prepared by SACOG in 2025

Figure 2-7 Planned (2050) Transportation Network



Source: Prepared by SACOG in 2025.

Figure 2-8 Existing (2020) Bicycle Network



Source: Prepared by SACOG in 2025.

Figure 2-9 Planned (2050) Bicycle Network

TRANSPORTATION PROJECTS FOOTPRINT

Not all the proposed plan's transportation strategies would be expected to require earthmoving activities and/or have a footprint associated with implementation. The transportation projects footprint includes proposed major transportation projects that have the greatest potential for physical impacts, generally limited to capacity increasing projects that add travel lanes to freeways, expressways, and highways or add new rail, ferry, or bus rapid transit routes and stations. The actual footprints and other design details of most proposed transportation projects are not known because the projects are in the early stages of planning. The proposed plan's transportation projects footprint was developed by adding buffer areas around the center line of proposed roadway and public transit projects. See Chapter 3, "Environmental Impacts and Mitigation Measures," for more discussion on the development of the transportation projects footprint.

Tables 2-12, 2-13, and 2-14 summarize the acreage potentially affected by the transportation improvements that are planned for in the 2025 Blueprint. As shown in Table 2-12, the total footprint associated with these major transportation projects is approximately 5,814 acres. The most improvements, by area, are planned in Sacramento County (Table 2-12), and in Established and Developing communities (Table 2-13). Over half of the total area affected by planned improvements would be located in HFTAs (Table 2-14).

Table 2-12 Acreage Transportation Improvements, by County

County	Planned Transportation Improvements (100-foot buffer in acres)
El Dorado	325
Placer	1,417
Sacramento	3,317
Sutter	48
Yolo	579
Yuba	127
Region	5,814

Source: Prepared by SACOG in 2025.

Table 2-13 Acreage of Transportation Improvements by Community Type

Community Type	Planned Transportation Improvements (100-foot buffer in acres)
Center/Corridor	622
Established	1,143
Developing	1,681
Rural Residential	232
Lands Not Identified for Development in the 2025 Blueprint	2,135
Region	5,814

Source: Prepared by SACOG in 2025.

Table 2-14 Acreage of Transportation Improvements within HFTAs

HFTA	Planned Transportation Improvements (10- foot buffer in acres)
Placer HFTA	896
Sacramento HFTA	1,654
Yolo HFTA	246
Total HFTA	2,796

Source: Prepared by SACOG in 2025.

2.6.3 2025 Blueprint Performance Outcomes

SACOG has identified performance indicators for the transportation system that are linked to the plan objectives and the triple bottom line framework described above. These performance metrics measure transit access, access to employment, and VMT and are shown in Table 2-15.

Table 2-15 2025 Blueprint Transportation Performance Indicators

	Metric	2020	2050	Percent Change
Transit Access	Homes near (half mile) high-frequency transit in region	112,700	592,700	426%
	Homes near (half mile) high-frequency transit in environmental justice areas	74,700	324,000	334%
Access to Employment	Jobs within 30-minute drive of workers homes	419,100	509,000	21%
	Jobs within 30-minute transit ride of workers homes	6,700	29,500	340%
	Jobs within 30-minute drive of workers homes in environmental justice areas	512,900	623,800	22%
	Jobs within 30-minute transit ride of homes in environmental justice areas	7,800	37,600	382%
VMT	Household VMT per capita	17.1	15.8	-8%
	Share of congested roadway VMT over total roadway VMT	5.2%	6.9%	32%

Source: Prepared by SACOG in 2025.

GHG EMISSIONS REDUCTION

As part of the statewide AB 32 Scoping Plan, CARB identifies reduction targets for a variety of sectors y. The GHG reduction target that is assigned to regional governments like SACOG is specifically related to GHG emissions from passenger vehicles achieved through a reduction in VMT. SACOG cannot and does not account for GHG reductions coming from other measures like vehicle electrification (specifically, those that are already accounted for in the State Scoping Plan; though SACOG is able to take credit for reductions that result from accelerated deployment of EVs through regional programs above and beyond what the state assumes), fleet efficiency, building codes, and carbon sequestration, and others. As such, the extent to which new growth affects the ability of SACOG to achieve its GHG target of 19 percent reduction in per capita GHG emissions is almost entirely dependent on the amount and distances residents drive.

Using the SACSIM travel demand model, staff analyzed the GHG performance of the 2025 Blueprint, which combines the transportation project list with the land use assumptions.

The combination of the land use and transportation projects, along with expansion of existing programs that reduce GHG such as bike- and scooter-share, TDM, car sharing, and local electric vehicle infrastructure and incentives would put the region in a position to achieve the per capita GHG reduction target. Staff explored additional strategies (including a regional school bus program, discounted transit fares, an additional TDM telework program, and an increased mileage-based user fee) but ultimately determined that these additional programs would be infeasible at this time given the cost to implement relative to the potential GHG benefits.

CARB must ultimately review and approve SACOG's GHG calculation methodology and confirm that the GHG reduction strategies, if implemented, would achieve the GHG reductions. Additional details on the 2025 Blueprint performance are provided in Chapter 5 of the 2025 Blueprint.

2.7 PURPOSE AND INTENDED USES OF THIS DRAFT EIR

An EIR is used to inform public-agency decision makers and the general public of the significant environmental impacts of a project, identify possible ways to minimize the significant impacts, and describe reasonable alternatives to the project that could feasibly attain most of the basic objectives of the project while substantially lessening or avoiding any of the significant environmental impacts. The SACOG board will use this Draft EIR when considering approval of the proposed plan.

Generally, the degree of specificity in an EIR should correspond to the degree of specificity of the underlying activity being evaluated (State CEQA Guidelines Section 15146). This Draft EIR is a program EIR that provides a programmatic analysis of potential impacts of the 2025 Blueprint. State CEQA Guidelines Section 15168 defines a program EIR as "…an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either: 1) geographically; 2) as logical parts in the chain of contemplated actions; 3) in connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or 4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways." Many of the specific transportation improvement and residential or mixed-use projects that would implement the 2025 Blueprint are not currently defined to a level that would allow for project-specific analysis. In this circumstance, it is appropriate to leave project-level details to subsequent EIRs that are prepared when specific projects are being considered.

2.7.1 CEQA Streamlining

This program-level Draft EIR is a first-tier document that addresses the environmental impacts that may result from adoption and implementation of the 2025 Blueprint. Therefore, future programs or projects may "tier" from this program EIR, as stipulated in CEQA. "Tiering" refers to the coverage of general environmental analysis in broad, program-level EIRs, with subsequent focused environmental documents for individual projects that implement the program.

Local jurisdictions and other implementing agencies would undertake future environmental review as CEQA lead agencies for projects in the 2025 Blueprint. If the potential environmental effects of consistent subsequent actions are adequately addressed by a certified program EIR, additional environmental analysis may be unnecessary. Implementation of the projects addressed in the 2025 Blueprint must individually demonstrate compliance with the requirements of CEQA and/or NEPA (for projects requiring federal funding or approvals). As appropriate, individual projects may be required to prepare a project-level analysis to fulfill CEQA and/or NEPA requirements. The lead agency responsible for reviewing these projects shall determine the level of review needed, and the scope of that analysis will depend on the specifics of the particular project. These projects may, however, use the discussion of impacts in this program-level Draft EIR as a basis of their assessment of these regional or cumulative impacts. For a lead agency to take advantage of the potential streamlining benefits associated with the SCS, the lead agency must comply with all feasible and applicable mitigation measures included in this Draft EIR to substantially lessen or avoid potentially significant impacts of the project.

This Draft EIR may be used to inform subsequent environmental documents for:

- planned transportation improvements consistent with the 2025 Blueprint; and
- residential or mixed-use projects and HFTA projects consistent with the projected land use pattern presented in the 2025 Blueprint.

STREAMLINING UNDER SB 375

SB 375 includes several CEQA streamlining provisions for TPPs. A TPP is a project that meets all the following criteria:

- consistent with the general land use designation, density, building intensity, and applicable policies specified for the project area in the SCS;
- located within 0.5 mile of a major transit stop or high-quality transit corridor;
- composed of at least 50 percent residential use based on total building square footage and if 26–50 percent of total building square footage is nonresidential, a minimum floor area ratio of 0.75; and
- built out with a minimum of 20 dwelling units per acre (PRC Section 21155).

One of three potential streamlining benefits may apply to a TPP pursuant to SB 375, as described below.

1. TPPs that meet a detailed list of criteria set forth in PRC Section 21155.1 are statutorily exempt from CEQA. Because the list of criteria that must be met to achieve this exemption is extensive, the exemption may be available only in limited circumstances.

- A TPP that does not qualify for the statutory exemption may be eligible to comply with CEQA using a Sustainable Communities Environmental Assessment (SCEA). An SCEA is similar to a streamlined negative declaration or mitigated negative declaration and requires a 30-day public review period. An SCEA is available for a TPP that would not result in any potentially significant environmental impacts after mitigation and that has incorporated all feasible mitigation measures, performance standards, or criteria set forth in the prior applicable EIRs, including the EIR for the RTP/SCS. An SCEA is not required to discuss (1) growth-inducing impacts or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network (PRC Sections 21155.2[b][1], 21159.28[a]). In addition, unlike a negative declaration or mitigated negative declaration, a lead agency's decision to approve a TPP based on an SCEA is reviewed, if challenged, by a court under the substantial evidence standard (PRC Section 21155.2[b][7]).

2. A TPP that would result in one or more potentially significant impacts after mitigation may be reviewed using a tiered TPP EIR as established by PRC Section 21155.2(c). A tiered TPP EIR is required to address only the significant or potentially significant effects of the TPP on the environment. It is not required to include a discussion of (1) growth-inducing impacts, (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network, (3) cumulative effects that have been adequately addressed and mitigated in prior applicable certified EIRs, (4) off-site alternatives, or (5) a reduced-density alternative to address effects of car and light truck trips generated by the TPP (PRC Sections 21155.2[c], 21159.28[a] and [b]).

In addition to the benefits provided for TPPs, SB 375 provides streamlining benefits for residential or mixed-use residential projects, as defined in PRC Section 21159.28(d), that are consistent with the use designation, density, building intensity, and applicable policies specified for the project area in the SCS. Projects eligible for streamlining must incorporate mitigation measures required by an applicable environmental document. EIRs for qualifying residential or mixed-use residential projects are not required to include a discussion of (1) growth-inducing impacts, (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network, or (3) a reduced-density alternative to address effects of car and light truck trips generated by the project (PRC Section 21159.28[a] and [b]).

Table 2-16 lists the prerequisites and qualifications for residential/mixed-use residential projects, TPPs, and sustainable communities projects and the corresponding CEQA streamlining benefits under SB 375. Projects that use the SB 375 CEQA streamlining benefits would still need to obtain discretionary permits or other approvals from the lead agency and the local jurisdiction, in accordance with local codes and procedures, including any agreements related to zoning, design review, use permits, and other local code requirements. Other development projects that do not fall into any of these categories could still use this EIR for other CEQA tiering benefits.

STREAMLINING UNDER SB 226

In 2011, the legislature enacted SB 226 to establish additional streamlining benefits applicable to infill projects that are consistent with the requirements set forth in State CEQA Guidelines Section 15183.3 (PRC Sections 21094.5[c], 21094.5.5). Residential, commercial and retail, public office buildings, transit stations, schools, and combinations of such uses are eligible for this streamlining provided they meet the following requirements: (1) are located in an urban area on a site that has been previously developed or adjoins existing qualified urban uses on at least 75 percent of the site's perimeter; (2) satisfy the performance standards provided in Appendix M of the State CEQA Guidelines; and (3) are consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either an SCS or an alternative planning strategy, with some exceptions. For these projects, an "infill EIR" is required to analyze only effects on the environment that are specific to the project or to the project site and that were not addressed as significant effects in a prior planning-level EIR unless new information shows the effects would be more significant than described in the prior EIR (PRC Section 21094.5[a][1]). Moreover, an infill EIR is not required to consider potentially significant environmental effects of the project that would be reduced to a less-than-significant level by applying uniformly applicable development policies or standards adopted by the city, county, or the lead agency (PRC Section 21094.5[a][2]). The infill EIR is not required to discuss (1) alternative locations, project densities, or building intensities or (2) growth-inducing impacts.

Unlike the CEQA streamlining benefits established by SB 375 which are limited to residential projects, the benefits created by SB 226 may apply to nonresidential projects, including qualifying commercial, retail, transit station, school, or public office building projects (State CEQA Guidelines Section 15183.3[f][1]).

Table 2-16 SB 375 Requirements for CEQA Streamlining Related to an SCS

Project Designation	Mixed-Use Residential Project	Transit Priority Project	Sustainable Communities Project
Prerequisites	▶ MPO adopts an SCS or alternative planning strategy (APS) that can achieve region's GHG emissions reduction target ▶ CARB accepts the SCS or APS ▶ Proposed project is a residential or residential mixed-use project consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in the SCS or APS ▶ Project has incorporated applicable mitigation measures or performance standards required by a prior environmental document	▶ MPO adopts an SCS or APS that can achieve region's GHG emissions reduction target ▶ CARB accepts the SCS or APS ▶ Proposed project is a residential or residential mixed-use project consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in the SCS or APS ▶ Project has incorporated applicable mitigation measures or performance standards required by a prior environmental document	▶ MPO adopts an SCS or APS that can achieve region's GHG emissions reduction target ▶ CARB accepts the SCS or APS ▶ Proposed project is a residential or residential mixed-use project consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in the SCS or APS ▶ Project has incorporated applicable mitigation measures or performance standards required by a prior environmental document
Qualifications	▶ At least 75% of total building square footage for residential use	▶ At least 50% of total building square footage for residential use and if 26–50% of total building square footage is nonresidential, a minimum FAR of 0.75; ▶ Minimum net density of 20 du/acre; and ▶ Within 0.5 mile of major transit stop or high-quality transit corridor included in the RTP	Everything for Transit Priority Project PLUS: ▶ Served by existing utilities ▶ Applicant pays all applicable fees ▶ Does not contain wetlands or riparian areas ▶ Does not have significant value as a wildlife habitat and does not harm any protected species ▶ Not on the Cortese List ▶ No risks from hazardous substances ▶ No impacts on historic resources ▶ No wildfire, seismic, flood, or public health risk ▶ Not on developed open space ▶ Buildings are 15% more energy efficient than required under Title 24 ▶ Landscaping uses 25% less water than average households ▶ Site is no more than 8 acres ▶ No more than 200 housing units ▶ No net loss of affordable housing within project area ▶ No building greater than 75,000 square feet ▶ Does not conflict with nearby industrial uses

Project Designation	Mixed-Use Residential Project	Transit Priority Project	Sustainable Communities Project
			▶ Meets minimum affordable housing requirements as prescribed in SB 375 OR in-lieu fee paid OR 5 acres of open space per 1,000 residents provided
Streamlining Benefits	Environmental documents are **not** required to reference, describe, or discuss: ▶ Growth-inducing impacts ▶ Impacts from car and light-duty truck trips on global warming or ▶ the regional transportation network ▶ A reduced-density alternative to project (EIRs only) ▶ Cumulative effects that have been adequately addressed and mitigated in prior applicable certified EIRs ▶ Off-site alternatives	The lead agency may determine whether to pursue a Sustainable Communities Environmental Assessment (SCEA) or a Limited Analysis EIR: ▶ Lead agency prepares only an initial study that identifies all significant impacts, except for growth-inducing impacts and impacts from car and light-duty truck trips on global warming or the regional transportation network ▶ Cumulative effects identified and mitigated for in previous applicable EIRs shall NOT be treated as cumulatively considerable for the project ▶ Shall contain mitigation measures to avoid or mitigate to a level of less than significant all significant effects identified ▶ 30-day public comment period ▶ May be approved after the lead agency conducts a public hearing, reviews comments received, and finds that all potentially significant effects have been identified, analyzed, and mitigated to a level of less than significant ▶ The fee to appeal a planning commission decision to the decision-making body shall not exceed $500 ▶ Deferential review standard—the burden of proof for legal challenge is on the petitioner/plaintiff ▶ Limited analysis EIR	▶ Exempt from CEQA ▶ Lead agency may file a notice of exemption upon project approval

Source: Compiled by Ascent in 2025 based on California Public Resources Code, Division 13, Chapter 4.2 (Implementation of the Sustainable Communities Strategy), Section 21155.

STREAMLINING UNDER SB 743

SB 743 (2013) (PRC Section 21099 and 21155.4) created an exemption from CEQA for certain projects that are consistent with a specific plan. A specific plan is a local plan that contains specific policies and development regulations for a defined area. The exemption applies if a project meets all of the following criteria:

- Residential, employment center, or mixed use project.
- Located within a transit priority area.
- Consistent with a specific plan for which an environmental impact report was certified.
- Consistent with an adopted SCS or alternative planning strategy.

The exemption cannot be applied if the project would cause new or worse significant environmental impacts compared to what was analyzed in the EIR for the specific plan. In that case, supplemental environmental review must be prepared. SB 743 also specifies that aesthetic and parking impacts of residential, mixed-use residential, or employment center uses on infill sites within a transit priority area shall not be considered significant effects on the environment (PRC Section 21099[d].)

OTHER TIERING OPPORTUNITIES

Finally, for all other types of projects proposed to be carried out or approved by a lead agency within the region, the lead agency may utilize this Draft EIR for the purposes of other allowed CEQA tiering if consistent with the analysis and conditions stated herein (PRC Sections 21068.5, 21093-21094, State CEQA Guidelines 15152, 15385). By tiering from this Draft EIR (if certified by SACOG), a later tiered EIR would not be required to examine effects that (1) were mitigated or avoided in this EIR, (2) were examined at a sufficient level of detail in this Draft EIR to enable those effects to be mitigated or avoided by site specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project, or (3) constitute cumulative effects and were adequately addressed in this Draft EIR (PRC Section 21094).

2.7.2 Actions to Adopt and Implement the Proposed Plan

If adopted by SACOG, the 2025 Blueprint would guide regional housing, economic, transportation, and environmental strategies and investments for the region. Following adoption by the SACOG board, the 2025 Blueprint would be submitted to other agencies that oversee the regulatory process, as follows.

The 2025 Blueprint requires a conformity determination under the CAA section 176(c). The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) make the final determination of conformity on the Regional Transportation Plan elements. A FHWA/FTA air quality conformity determination for transportation is required for the 2025 Blueprint pursuant to the Environmental Protection Agency's *Transportation Conformity Rule*, 40 CFR Parts 51 and 93, and the United States Department of Transportation's *Final Rule on Statewide and Metropolitan Planning*, 23 CFR Part 450. The conformity analysis that is submitted must indicate that all air quality conformity requirements have been met. Based on review by FHWA and FTA, and after consultation with the Environmental Protection Agency's Region 9 office, FHWA/FTA make a finding relative to the applicable State Implementation Plan in accordance with the provisions of 40 CFR Parts 51 and 93.

Under SB 375, the 2025 Blueprint is subject to review and approval by CARB. Specifically, the SCS component of the 2025 Blueprint will be reviewed by CARB to determine whether the adopted SCS, if implemented, would meet the region's 19 percent per capita GHG reduction target. If the combination of strategies in the SCS would not meet the regional targets, SACOG must prepare an "alternative planning strategy" to meet the regional GHG emissions reduction target.

3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

This Draft EIR analyzes the environmental effects of the 2025 Blueprint and provides local decisionmakers and the public with an objective analysis of the potential environmental consequences of its implementation. This Draft EIR presents a programmatic assessment of the potential impacts, focusing on the entire set of projects, programs, and strategies contained in the proposed plan. Individual transportation and development project impacts are not addressed in detail. Although this Draft EIR provides environmental analysis and mitigation that is intended to address the range of impacts that may be associated with individual projects, the analysis in this Draft EIR does not evaluate the project-specific impacts of individual projects and does not relieve local jurisdictions of responsibility for determining whether project-specific impacts require additional CEQA analysis.

This chapter is organized by environmental resource topics. Sections 3.1 through 3.19 present a discussion of regulatory background, existing conditions, environmental impacts associated with the plan, mitigation measures to reduce the level of impact, and residual level of significance (i.e., after application of mitigation, including impacts that would remain significant and unavoidable after application of all feasible mitigation measures). Sections 3.1 through 3.19 of this Draft EIR each include the following components:

Regulatory Setting: This subsection presents information on the laws, regulations, plans, and policies that relate to the issue area being discussed. Regulations originating from the federal, state, and local levels are each discussed as appropriate.

Environmental Setting: This subsection presents the existing environmental conditions in the plan area, in accordance with Section 15125 of the State CEQA Guidelines. The discussions of the environmental setting focus on information relevant to the issue under evaluation.

Environmental Impacts and Mitigation Measures: This subsection presents thresholds of significance and discusses significant and potentially significant effects of the 2025 Blueprint on the existing environment in the vicinity of the proposed plan, in accordance with Section 15126.2 of the State CEQA Guidelines. The methodology for impact analysis is described, including technical studies upon which the analyses rely. The thresholds of significance are defined and thresholds for which the project would have no impact are disclosed and dismissed from further evaluation.

Appendix G of the State CEQA Guidelines provides criteria for determining the significance of a project's environmental impacts, in the form of sample Initial Study checklist questions. Unless otherwise noted, this Draft EIR applies significance criteria based on these checklist questions. In some cases, SACOG has combined checklist questions, edited their wording, or changed their location in the document in an effort to develop significance criteria that reflect the programmatic level of analysis in this Draft EIR and the unique characteristics of the proposed plan.

Project impacts and mitigation measures are numbered sequentially in each subsection (e.g., Impact 3.2-1, Impact 3.2-2, Impact 3.2-3, etc.). A summary impact statement precedes a more detailed discussion of each environmental impact. Potential impacts of the 2025 Blueprint are analyzed first in terms of the proposed land use pattern, then in terms of the planned transportation improvements. This analytical structure is used to provide the reader with information about all components of the proposed plan. The discussion includes the analysis, rationale, and substantial evidence on which conclusions are based. The determination of the level of significance of the impact is based on the combined land use pattern and planned transportation improvements of the 2025 Blueprint and is presented in bold text.

Significance determinations reflect the programmatic nature and regional-scale of the 2025 Blueprint. The analyses address broadly defined types of impacts without the ability to determine the precise project locations, size, and design, or site-specific environmental characteristics of proposed projects. Some impact issues are determined to be potentially significant, because the possibility that future projects would cause a substantial adverse effect on environmentally sensitive resources cannot be dismissed. This conservative approach (i.e., avoiding the risk of understating environmental impacts) is intended to satisfy the good-faith, full-disclosure purpose of CEQA.

Where an existing law, regulation, or permit specifies mandatory and prescriptive actions about how to fulfill the regulatory requirement as part of the project definition, leaving little discretion in its implementation, and would avoid an impact or maintain it at a less-than-significant level, the environmental protection afforded by the regulation is considered before determining impact significance. Where existing laws or regulations establish performance standards without prescriptive actions to accomplish them, or other requirements that allow substantial discretion in how they are accomplished, or have a substantial compensatory component, the level of significance is determined before applying the influence of the regulatory requirements. In this circumstance, the impact would be potentially significant or significant, and the regulatory requirements would be included as a mitigation measure.

Feasible mitigation measures are identified to avoid, minimize, rectify, reduce, or compensate for significant or potentially significant impacts, in accordance with State CEQA Guidelines Section 15126.4. Agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081). However, SACOG does not have regulatory or approval authority over most future projects evaluated in this Draft EIR and SACOG cannot require local implementing agencies to adopt mitigation measures. In order to rely on this Draft EIR to streamline environmental review for an individual project, the lead agency must require the applicable mitigation measures, or other comparable measures, as a part of the project-level environmental review. The project sponsor or lead agency would be responsible for ensuring adherence to the mitigation measures during construction and operation of the project. Pursuant to State CEQA Guidelines Section 15126.4, subd. (a)(1)(A), this Draft EIR acknowledges SACOG's lack of authority to implement mitigation at the project-level by clarifying that local agencies have the discretion to implement and enforce the mitigation measures as part of a project-level approval. Because SACOG lacks the authority to impose the mitigation measures at the project-level, the Draft EIR does not factor the mitigation measures into the overall significance determination for each impact. Significant-and-unavoidable impacts are identified as appropriate in accordance with State CEQA Guidelines Section 15126.2(b). Significant-and-unavoidable impacts are identified as appropriate in accordance with State CEQA Guidelines Section 15126.2(b).

QUANTIFICATION METHODOLOGY

The programmatic and long-term nature of the project underlying this Draft EIR necessitates that existing conditions and potential impacts associated with implementation of the 2025 Blueprint be evaluated generally. Most commonly, these analyses are qualitative in nature, with quantitative analysis provided where information is available and applicable.

Where growth is anticipated to occur based on the land use forecast described in Chapter 2, "Project Description," development or redevelopment could result in physical changes to the environment. Because the 2025 Blueprint could indirectly result in the conversion of land use through policies and programs that influence regional development patterns, this Draft EIR analyzes the effects of regional growth that adheres to the land use forecast developed by SACOG.

Implementation of planned transportation projects assumed as a part of the 2025 Blueprint are difficult to quantify in acres. However, for purposes of analyzing the transportation impact to environmental resources, transportation projects were spatially analyzed by calculating a 100-foot buffer around the centerlines of proposed road widenings, new roads, and new or expanded interchanges. New transit infrastructure is included on existing or new or widened roads and is, therefore, included in this analysis. Note also that there is an overlap between the land use growth footprint and the transportation project buffer, potentially resulting in an overestimation of impact acreage.

Using this quantification methodology, this Draft EIR provides a sufficient degree of analysis by disclosing the environmental impacts of the 2025 Blueprint, to the extent that "is reasonably feasible." (State CEQA Guidelines Section 15151).

BASELINE

The State CEQA Guidelines provide that the existing physical conditions at the time the Notice of Preparation (NOP) is published will "normally" constitute the baseline. (Guidelines Section 15125(a).) However, State CEQA Guidelines Section 15125(a)(1) indicates that, "where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project's impacts, a lead agency may define existing conditions by referencing historic conditions…that are supported by substantial evidence."

Unless otherwise stated, the baseline existing physical conditions in this Draft EIR are those physical conditions that existed at the time the NOP was published in January of 2025. However, this Draft EIR sometimes relies on older data, where specified, to describe the environmental setting in instances where that older data is the most reliable source of information about existing conditions.

The 2025 Blueprint itself uses 2020 pre-pandemic conditions for growth forecasting because it is the most recent year for which comprehensive land use, demographic, traffic count, and vehicle miles traveled (VMT) data are available for the plan area. This is distinct from the baseline conditions used to analyze the environmental impacts of the 2025 Blueprint for compliance with CEQA.

SACOG's travel model requires comprehensive land use data, which are built upon baseline land use data. The U.S. Census Bureau American Community Survey's average 5-year estimates up to 2020 provide the most complete coverage for many of the demographic data needed to simulate travel demand using the Sacramento Regional Activity-Based Simulation Model (SACSIM) model. The VMT estimates are compiled from Highway Performance Monitoring System (HPMS) data, which have been published for years up to 2020 at the time the NOP was released.

In addition, baseline data are created at the parcel-level to coincide with each MTP/SCS update cycle. The housing unit, employee, and land use data used in the baseline land use data set come from different sources, including local government inventories (where available), assessor data, and aerial photography. These data sources, in combination with jurisdiction housing permit data that is updated by SACOG with state and local government data and compared to State Employment and Development Department records, were used to create SACOG's spatial estimate of existing land uses. SACOG last assembled traffic counts taken by local agencies within their jurisdictions in 2020.

Once data is acquired, it must be processed into a format compatible with SACOG's travel model. The resulting baseline data set is then vetted through local jurisdictions for accuracy. Edits are made to the baseline data set if local agencies provide corrections; the baseline data set is then recirculated for confirmation of accuracy. This detailed data assembly and vetting at a parcel level for the entire SACOG region takes approximately 18 to 24 months. The baseline land use data set that represents 2020 conditions was completed in 2022. Due to the substantial length of time required to compile and model these data, coupled with the limited accessibility of retrieving more recent data, the 2020 data set represents the most current and feasible data compiled and fully vetted. This 2020 data set was then used to develop alternative planning scenarios for consideration by the SACOG Board of Directors and for use in the 2025 Blueprint's extensive planning and public engagement process.

However, where appropriate and as identified throughout this Draft EIR, the environmental and regulatory settings of various resource areas have used more recent data to better characterize baseline conditions. Or, conversely, where data were unavailable for 2019/2020 or a more recent year, the most recent data were used. See the "Methods and Assumptions" section for each resource area for an additional discussion of data used to characterize environmental and regulatory settings.

Interim Timeframes

The year 2050 is the horizon year of the 2025 Blueprint. While the 2025 Blueprint would be implemented gradually over the planning period, this Draft EIR does not analyze interim timeframes because the 4-year update cycle of the MTP/SCS already requires short-term adjustments to the proposed 2025 Blueprint.

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3.1 AESTHETICS

This section describes the existing conditions (environmental and regulatory) and evaluates the potential aesthetic impacts of the 2025 Blueprint. This analysis evaluates impacts to scenic resources including scenic vistas, scenic resources along a state scenic highway, and visual character, as well as light, glare, and shadow impacts. Where necessary and feasible, mitigation measures are identified to reduce these impacts. SACOG did not receive comments related to aesthetics in response to the notice of preparation.

3.1.1 Regulatory Setting

FEDERAL

Fixing America's Surface Transportation and Moving Ahead for Progress in the 21st Century (Map-21) Acts

Under the Fixing America's Surface Transportation (FAST [Public Law 114-94]) Act and Moving Ahead for Progress in the 21st Century Act (MAP-21 [Public Law 112-141]), the US Department of Transportation requires that metropolitan planning organizations, such as SACOG, prepare long-range regional transportation plans (RTPs) and update them every four years if they are in areas designated as "nonattainment" or "maintenance" for federal air quality standards. Prior to enactment of MAP-21, the primary federal requirements regarding RTPs were included in the metropolitan transportation planning rules—Title 23 CFR Part 450 and 49 CFR Part 613. The FAST Act and MAP-21 make a number of changes to the statutes that underpin these regulations. With respect to aesthetics, there are numerous provisions for improvements and changes to the implementation of transportation enhancement activities. These include a list of qualifying transportation enhancement activities, which include several items supportive of visual quality enhancement such as acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs, landscaping or other scenic beautification, and control and removal of outdoor advertising, among others that would qualify for a Categorial Exclusion under the National Environmental Policy Act pursuant to 23 CFR Part 771.

Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act of 1968 (16 USC Sections 1271–1287) consists of Public Law 90-542 (October 2, 1968) and amendments thereto. The act established a method for providing federal protection for certain of the country's remaining free-flowing rivers, preserving them and their immediate environments for the use and enjoyment of present and future generations. Eligible rivers can be designated as Wild River Areas, Scenic River Areas, or Recreational River Areas. Recreational River Areas are "those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past." The Wild and Scenic Rivers Act, under Section 10, includes management direction for designated rivers. Section 10(a) states the following:

> *"…each component of the national wild and scenic rivers system shall be administered in such manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration primary emphasis shall be given to protecting its aesthetic, scenic, historic, archaeologic, and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development, based on the special attributes of the area."*

United States Department of Transportation Act, Section 4(f)

Section 4(f) of the Department of Transportation Act of 1966 (49 USC Section 303) was enacted to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. Section 4(f) requires a comprehensive evaluation of all environmental impacts resulting from federal-aid

transportation projects administered by Federal Highway Administration, Federal Transit Administration, and Federal Aviation Administration that involve the use-or interference with use-of the following types of land:

- public park lands;
- recreation areas;
- wildlife and waterfowl refuges; or
- publicly- or privately owned historic properties of federal, state, or local significance.

This evaluation, called the Section 4(f) statement, must be sufficiently detailed to permit the US Secretary of Transportation to determine that:

- there is no feasible and prudent alternative to the use of such land;
- the program includes all possible planning to minimize harm to any park, recreation area, wildlife and waterfowl refuge, or historic site that would result from the use of such lands; and
- if there is a feasible and prudent alternative, a proposed project using Section 4(f) lands cannot be approved by the Secretary; or if there is no feasible and prudent alternative, the proposed project must include all possible planning to minimize harm to the affected lands.

Detailed inventories of the locations and likely impacts on resources that fall into the Section 4(f) category are required in project-level environmental assessments.

In August 2005, Section 4(f) was amended to simplify the process for approval of projects that have only minimal impacts on lands protected by Section 4(f). Under the new provisions, the US Secretary of Transportation may find such a minimal impact if consultation with the State Historic Preservation Officer results in a determination that a transportation project will have no adverse effect on an applicable Section 4(f) property or that there will be no properties protected by Section 4(f) affected by the proposed action. In such instances, analysis of avoidance alternatives is not required, and the Section 4(f) evaluation process is complete following consultation.

National Trails System Act

The National Trails System Act of 1968 established a network of national recreation, scenic, and historical trails. National scenic trails are established to "provide for maximum outdoor recreation potential and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of areas through which such trails may pass. National scenic trails may be located to represent desert, marsh, grassland, mountain, canyon, river forest and other areas, as well as landforms which exhibit significant characteristics of the physiographic regions of the Nation" (16 USC Section 1242). Currently, there are 11 national scenic trails, 21 national historic trails, and over 1,300 national recreation trails (NPS 2024). Regardless of trail type, measures may be included in the trail's respective management or comprehensive plan to protect and preserve the visual resources associated with these trails. National scenic and historic trails are normally managed by the National Park Service (NPS), US Forest Service (USFS), or Bureau of Land Management (BLM). However, some trails may fall under multiple jurisdictions and land ownership due to the geographic extent. This requires the agencies and landowners to manage the trails in a collaborative process.

Federal Land Policy and Management Act

The Federal Land Policy and Management Act requires federal agencies to manage, protect and minimize damage to scenic, visual and aesthetic resources located on public lands. BLM uses a Visual Resource Management System to manage the resources under its jurisdiction. As required by the Federal Land Policy and Management Act, the evaluation of areas managed by the BLM that are potentially affected by a project shall consider the rules or guidelines specified under the Visual Resource Management System for the purpose of applying area-specific management priorities.

Antiquities Act

The Antiquities Act of 1906 granted the authority to the President to establish national monuments by Presidential Proclamation (16 USC 431). Since implementation of the law, 171 national monuments have been established by

presidential proclamation on lands primarily under federal jurisdictions (NPS 2025). The National Monuments and the Antiquities Act Report for Congress prepared by the Congressional Research Service specifies that Presidents have used this authority for a number of purposes including general conservation, recreation, scenic protection, or protection of living organisms (CRS 2017). National monuments can be administered and managed by the NPS, USFS, BLM, or other agencies and often require a collaboration since the geographical extent of these monument areas can cross multiple jurisdictional boundaries.

STATE

California Department of Transportation Scenic Highway Program

The California Department of Transportation (Caltrans) Scenic Highway Program was created by the State legislature in 1963 to preserve and protect scenic highway corridors from change that would reduce the aesthetic value of lands adjacent to highways. A scenic highway corridor is defined by Caltrans as the area of land generally adjacent to and visible from the highway (Caltrans 2019). It is usually limited by topography and/or jurisdictional boundaries. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. The program also consists of laws, incentives, and guidelines intended to protect the scenic, historic, and recreational resources within designated scenic highway corridors. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

State goals for scenic highways include the following:

1. preserve and enhance the unique visual, biological, and ecological resources of the Scenic Highway Corridor;
2. prevent and eliminate (when reasonably possible) conditions that detract from or compromise the quality of the aesthetic resources of the Scenic Highway Corridor;
3. encourage the development and maintenance of park and recreational facilities that contribute to the aesthetic quality of the Scenic Highway Corridor;
4. encourage preservation of historical landmarks adjacent to the Scenic Highway Corridor; and
5. encourage community civic groups to create programs that increase community interest in the visual assets of the Scenic Highway Corridor and facilitate the implementation of such programs.

To be included in the program, the highways proposed for designation must meet Caltrans' eligibility requirements and have visual merit. After it is determined that a proposed highway satisfies the qualifications for Scenic Highway designation, the local jurisdiction, with support of its citizens, must adopt a program to protect the scenic corridor. The five legislatively required standards for scenic highways are:

1. regulation of land use and density (i.e., density classifications and types of allowable land uses);
2. detailed land and site planning (i.e., permit or design review authority and regulations for the review of proposed developments);
3. prohibition of off-site outdoor advertising and control of on-site outdoor advertising;
4. careful attention to and control of earthmoving and landscaping (i.e., grading ordinances, grading permit requirements, design review authority, landscaping and vegetation requirement); and
5. the design and appearance of structures and equipment (e.g., placement of utility structures, microwave receptors).

The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and receives notification that the highway has been designated as a scenic highway.

In addition, designated scenic highways may also include specific Corridor Protection Programs to preserve and enhance the viewshed around the designated scenic highway. The following text from the Caltrans Scenic Highway Program website illustrates the protections provided by a Corridor Protection Program.

> *"When a city or county nominates an eligible scenic highway for official designation, it must identify and define the scenic corridor of the highway. Scenic corridors consist of land that is visible from 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. The city or county must also adopt ordinances, zoning and/or planning policies to preserve the scenic quality of the corridor or document such regulations that already exist in various portions of local codes. They should be written in sufficient detail to avoid broad discretionary interpretation and demonstrate a concise strategy to effectively maintain the scenic character of the corridor. These ordinances and/or policies make up the Corridor Protection Program." (Caltrans 2011).*

California Code of Regulations Title 24 Part 6

The California Energy Code (14 CCR Section 6) creates standards in an effort to reduce energy consumption. The type of luminaries and the allowable wattage of certain outdoor lighting applications are regulated.

Capital View Protection Act

Chapter 2.8 of the Cal. Gov. Code includes the Capitol View Protection Act (Government Code Sections 8162.5–8162.9). These sections establish building height limits and setback requirements within a portion of downtown Sacramento surrounding the State Capitol and Capitol Park to preserve and enhance the visual prominence of the State Capitol, and character and scale of Capitol Park, as a unique cultural and open-space resource.

Senate Bill 743

SB 743 (2013) (PRC Section 21099 and 21155.4) created an exemption from CEQA for certain projects that are consistent with a specific plan. (PRC Section 21155.4.) A specific plan is a local plan that contains specific policies and development regulations for a defined area. The exemption applies if a project meets all of the following criteria:

1. It is a residential, employment center, or mixed use project;
2. It is located within a transit priority area (TPA);
3. The project is consistent with a specific plan for which an environmental impact report was certified; and
4. It is consistent with an adopted SCS or alternative planning strategy.

The exemption cannot be applied if the project would cause new or worse significant environmental impacts compared to what was analyzed in the environmental impact report for the specific plan. In that case, supplemental environmental review must be prepared.

SB 743 also specifies that aesthetic and parking impacts of residential, mixed-use residential, or employment center uses on infill sites within a TPA shall not be considered significant effects on the environment. (PRC Section 21099(d).)

LOCAL

General Plans and Regulations

Policies to preserve and enhance the visual quality and aesthetic resources of developed and natural areas, including scenic roadways and routes, are often established in a jurisdiction's general plan and its implementing regulations. Examples of implementing regulations include the City of Sacramento Capitol View Protection requirements and the Sutter Buttes Overlay Zoning Ordinance The value attributed to a visual resource is typically based on the characteristics and distinctiveness of the resource and the number of persons who view it. Vistas of undisturbed natural areas, unique or unusual features forming an important or dominant portion of a viewshed, and distant vistas offering relief from less attractive nearby features are frequently considered to be scenic resources. In some instances, a case-by-case determination of scenic value may be needed, but often there is agreement within the relevant

community about which features are valued as scenic resources, and these values are reflected in the policies included in the general plan and its implementing regulations.

Local general plans and other implementation regulations may include policies or provisions to:

- enhance the rural landscape;
- protect the rural night sky;
- preserve landmarks and icons;
- incorporate scenic elements into development;
- limit off-site advertising in scenic areas;
- place utilities underground;
- protect or enhance the quality of scenic roads or routes;
- promote sustainable design;
- reflect human-scale architecture;
- maintain and protect diverse established neighborhoods;
- promote mixed-use neighborhood centers;
- preserve natural waterways;
- maintain parks, forests, and other open space;
- encourage architectural design that creates a unique sense of place;
- preserve and create iconic buildings;
- provide appropriate transitions between land uses;
- encourage walking and biking;
- minimize obtrusive lighting; and
- avoid the creation of incompatible glare.

Local general plans are implemented by a variety of additional local plans and regulations that further achieve aesthetic goals and protect aesthetic resources. These include but are not limited to specific plans, area plans, zoning regulations, design requirements, design review programs, design guidelines, and park and open space plans.

3.1.2 Environmental Setting

The *aesthetic value* of an area is a measure of its *visual character* and *quality*, combined with the viewer response to the area (FWHA 1983). Visual character relates to the natural and built landscape features and the relationships that exist within the landscape. Form, line, color, and texture are the basic components used to describe visual character. Visual quality is the overall impression that an individual viewer retains after driving though, walking though, or flying over an area.

While aesthetic value is subjective, it is typically included as a criterion for evaluating those elements that contribute to the quality that distinguishes an area. Most communities identify scenic resources as an important asset, although what is considered "scenic" may vary according to its environmental setting.

Scenic resources can include natural open spaces, topographic formations, landscapes, and man-made features. Scenic resources can be maintained and enhanced in such a way as to continue promoting a positive image in the future. Many people associate natural landforms and landscapes with scenic resources, such as woodlands, lakes, rivers, streams, mountains, habitat, and agricultural lands. Scenic resources can also include urban open spaces and the built environment. Examples of these include urban parks, trails, and nature centers, archaeological and historical resources, and man-made structures like buildings and bridges with unique architectural features. Tall buildings may also provide excellent views of scenic resources beyond the urban core. Typically, jurisdictions identify *designated scenic resources*, or some similar classification system, to identify priority scenic resources. These designated scenic resources are a focus of this section.

It is useful to think of scenic resources in terms of "typical views" seen throughout the plan area because scenic resources are rarely encountered in isolation. A typical view may include several types of scenic resources, including both natural and man-made elements. The typical views seen in the plan area are outlined in the following paragraphs.

TYPICAL VIEWS OF VISUAL RESOURCES IN THE PLAN AREA

Aesthetically significant features occur in a diverse array of environments within the plan area, ranging in character from urban centers to rural agricultural lands to natural woodlands. The extraordinary range of visual features is afforded by the mixture of climate, topography, and flora and fauna found in the natural environment, and the diversity of style, composition, and distribution of the built environment.

A *viewshed* is defined as all of the surface area within the field of view of an observer that is visible from a particular location (e.g., an overlook) or sequence of locations (e.g., a roadway or trail) (FHWA 1983). The term is commonly used to describe the *extent* of a scenic resource. The extent of a viewshed can be limited by a number of intervening elements, including trees and other vegetation, built structures, or topography such as hills and mountains. Because of the regional scale of the 2025 Blueprint, generalized landscape units, instead of specific viewsheds, are described below.

The bulk of the plan area is located in the Central Valley, a basin bounded by the Sierra Nevada Range to the east and the Coastal Ranges to the west. Topography in the Central Valley is generally flat, with relief anywhere from slightly below sea level near the Sacramento-San Joaquin River Delta to over 2,150 feet above sea level at the Sutter Buttes. The network of rivers that drain the Sierra Nevada ranges and Central Valley are a key aesthetic component of the natural landscape.

The visual quality of existing communities in the plan area is enhanced by man-made elements. Examples of visually prominent built environment features may include bridges or overpasses, architecturally appealing buildings or groups of buildings, landscaped freeways, and locations where historic events occurred.

Agricultural Land and Pasture

Agricultural lands are a dominant visual landscape in the region, with approximately 1.8 million acres of agricultural land in the plan area. Agriculture is an important industry for the region, and agricultural lands contribute to the scenic value of the region and offer a break from the urban landscape by providing an open space visual resource. Agricultural buildings including barns, processing facilities, storage areas, and farm housing add character to the visual landscape. The character and typical agricultural practices in the plan area are discussed further in Section 3.2, "Agricultural and Forestry Resources."

Downtown Sacramento and West Sacramento Skyline and Historic Downtowns

The City of Sacramento skyline is distinguished by high-rise office towers ranging from 15-30 stories. Sacramento's downtown skyline is visible from miles around the city, including from eastbound Interstate 80 (I-80) on the Sacramento-Yolo Causeway, from westbound I-80 above the city of Roseville, from northbound Interstate 5 (I-5) between Elk Grove and Sacramento, from westbound US Highway 50 (US 50), and from southbound I-5 and Highway 99 (State Route [SR] 99) north of the downtown area. Distinctive features of the skyline include the Wells Fargo Center, the California Environmental Protection Agency building, the Robert T. Matsui Federal Courthouse, the newly constructed Tani G. Cantil-Sakauye Sacramento County Courthouse, the Capitol Mall building, the US Bank Tower, the US Bank Plaza, the Renaissance Tower, the Golden 1 Center, and, by night, the blue light of the Esquire Plaza.

Distinctive features in the West Sacramento skyline include the Ziggurat and the CalSTRS Building. Portions of a few additional buildings within West Sacramento, including the Sutter Health Park, formerly Raley Field, the Habitat and the Parks Modern Buildings are visible from the Sacramento riverfront between the Tower Bridge and Pioneer Bridge (City of Sacramento 2017).

The downtown Sacramento skyline, in particular, is dominated by highly reflective glass buildings, which can produce glare. Glare results when a light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying, referred to as discomfort glare, or it may diminish the ability to see other objects in the darkened environment, referred to as disability glare.

These downtown areas are also brighter than the outlying residential areas due to the amount of artificial light associated with exterior building lights, street lights, roadways, and parking area lights. Particularly in the Downtown

Sacramento area, strings of white light emitting diode market lists were installed in December 2015 to illuminate both sides of K Street (Downtown Sacramento Partnership 2019).

Tall buildings, such as those found in downtown areas, can cast shadows on surrounding land uses. Density increases the prevalence of shadow. In some instances, shadow can be beneficial, providing shade during hot, summer days. However, shadow can also cause discomfort and public hazard when it occurs sporadically, in conjunction with glare and light.

Many jurisdictions in the plan area have distinctive downtown "Main Street" districts that preserve important historical sites and protect the visual character of the area. Downtown Placerville and Historic Downtown Folsom are two of the most well-known examples, though this landscape type can be found in nearly all jurisdictions in the region.

Landmarks

In addition to the linear infrastructure systems, there are also discrete man-made elements within the landscape that serve as landmarks that inform the character of an area. The term landmark here is used to refer to a human-made structure (e.g., monument, building, other structure) that is easily recognizable. Through their scale and/or distinctive design, landmarks become reference points that provide structure and orientation and contribute to the design character of the surrounding area and create a unique sense of place. The State Capitol and Tower Bridge are two landmarks.

Mountain Views

Most of the plan area resides in the Central Valley, characterized by flat, open expanses with uninterrupted views of open space. However, mountains surround the plan area on the eastern and western borders. The Sierra Nevada Range makes up the eastern boundary of the plan area, covering vast areas of eastern Placer and El Dorado counties. The South Coast Ranges make up the western border of the plan area. Both mountain ranges are visible from many parts of the region due to the flat topography of the Central Valley.

Among the most unique topographic features within the plan area are the Sutter Buttes. Approximately 75 square miles in size, the Buttes are remnants of eroded volcanic lava domes. Rising 2,000 feet above the valley floor, the Buttes create a dramatic viewshed when juxtaposed to the vast open farmland in the surrounding area.

National Trails Systems

The plan area includes multiple trail types protected under the National Trails Systems Act. Scenic trails within the plan area include the Pacific Crest Trail that traverses the Eldorado National Forest in the eastern portion of Eldorado County and intersects Interstate 80 (I-80). National historic trails in the planning area include the California National Historic Trail, and the Pony Express Trail. The California National Historic Trail is a series of trails connecting California and Oregon to Missouri. One portion of the trail can be found to the southeast of Yuba City, traveling east adjacent to I-80. Another portion of the California National Historic Trail and the Pony Express Trail is located in Sacramento and travels east through the Eldorado National Forest.

There are two National Trails located within the planning area. These trails include the Pony Express Trail in Sacramento and El Dorado County and the Pacific Crest Trail which runs through the eastern portions of El Dorado and Placer County. These trails are illustrated in Figure 3.1-1.

Open Space, Habitat, and Protected Lands

Open space provides visual relief from urbanized areas, including views for residents, motorists, and pedestrians. Open space is comprised of both designated open space and "de facto" open space. Designated open space is land that has been left undeveloped by regulation or policy. Such land uses could include national, state, and local parks and recreation areas, nature preserves, protected habitat, and areas protected by conservation easements. Other land is deemed open space not by design, but because the land is not involved in a commercial use, or in the case of farmed land, the land is consumed by a commercial use that also contributes to the visual quality of the area.

Preserves, parks, and forests make up most of the designated open space in the region. These areas are maintained by a combination of local jurisdictions, state agencies, federal agencies, and private foundations. Much of the forested land in Placer and El Dorado counties falls under federal protection.

Open space provides wildlife habitat and can also provide opportunities for other facilities and services such as passive recreation, pedestrian and bike access, storm drainage, floodwater conveyance, utility infrastructure, and land use buffering.

Residential and Commercial Neighborhoods

Scattered throughout the plan area in most counties and cities are residential and commercial landscapes featuring single-family neighborhoods, low-rise multi-family complexes, low-rise office parks, and low-scale shopping areas. Areas where low-rise residential buildings dominate the viewshed are generally areas with more green space, less artificial light (meaning darker nighttime views), and less glare due to the limited amount of reflective materials. Commercial areas, including retail centers, generally consist of large concrete buildings located adjacent to the street frontage as well as set back with large, sparsely landscaped surface parking areas. Retail centers specifically often produce artificial nighttime lighting both in the parking lots and on the storefronts and signs. Storefronts typically consist of glass or other reflective surfaces that can create glare.

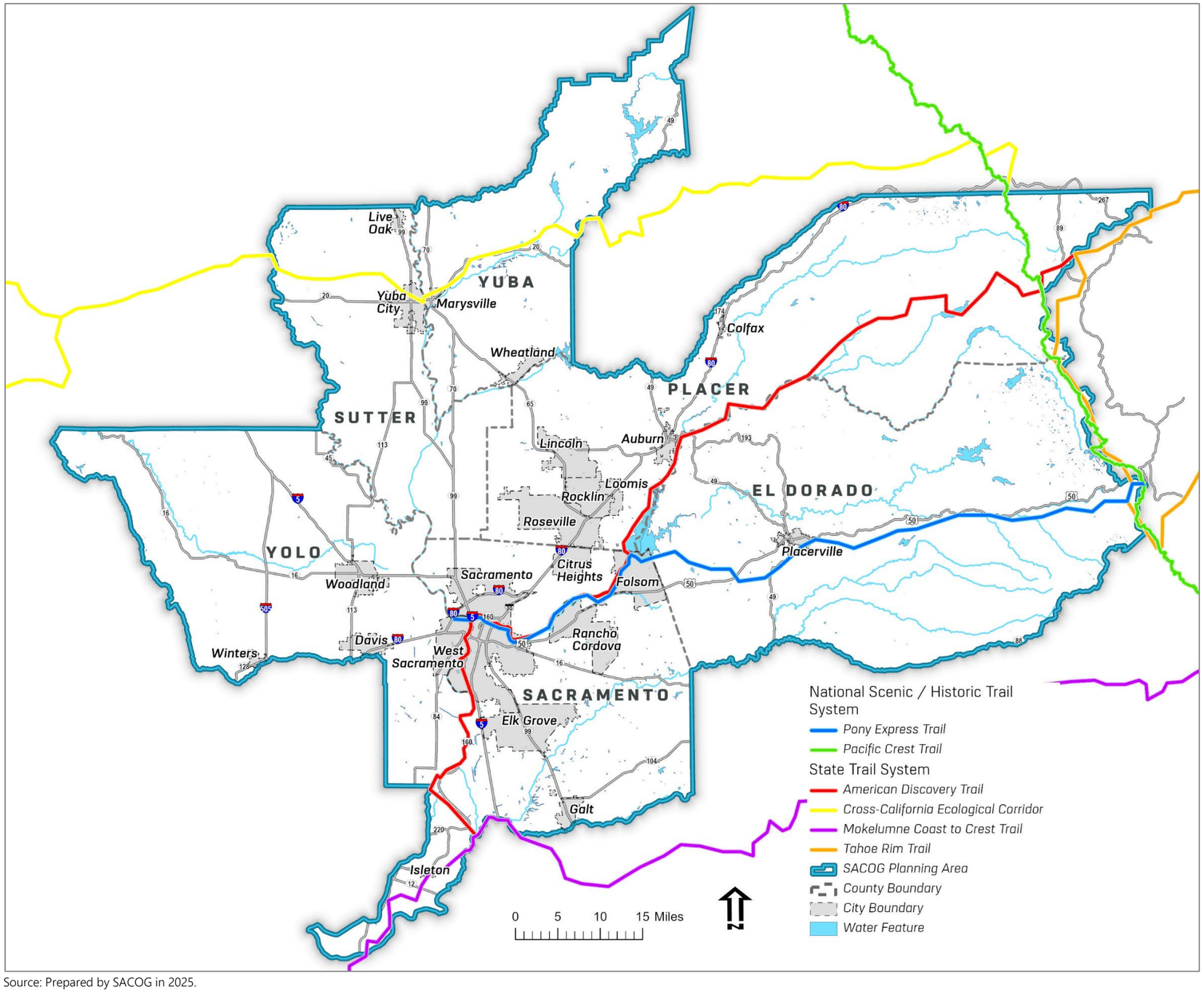
Transportation Network

Many views of the plan area are from the State highway, Interstate, and US freeway routes that traverse the plan area. The freeways themselves are also a visual component of the city landscape. I-5 and SR 99 are the two main north/south routes. I-5 is a major truck route within the State of California and runs through the downtown area, adjacent to the Sacramento River. SR 99 is a four- to six-lane highway extending south from Business 80 (Capital City Freeway) to South Sacramento, Elk Grove, and the Central Valley. I-80, US 50, and Capital City Freeway are the main east/west routes through the region. I-80 extends from the San Francisco Bay area, through West Sacramento and Sacramento and over the Sierra Nevada. US 50 extends from downtown Sacramento to the Tahoe Basin. The Capital City Freeway extends northeast from downtown Sacramento through Sacramento County, connecting to I-80 just east of Watt Avenue.

Streets in the plan area range from multi-lane, signalized roads to narrow tree-lined streets in residential neighborhoods. Roadways include minor arterials, collector streets that connect residential uses to major street systems, local streets that serve the interior of a neighborhood, and alleys that provide delivery access to businesses located along the transportation system. Within the plan area, streets have sidewalks and bicycle facilities included in the transportation right-of-way.

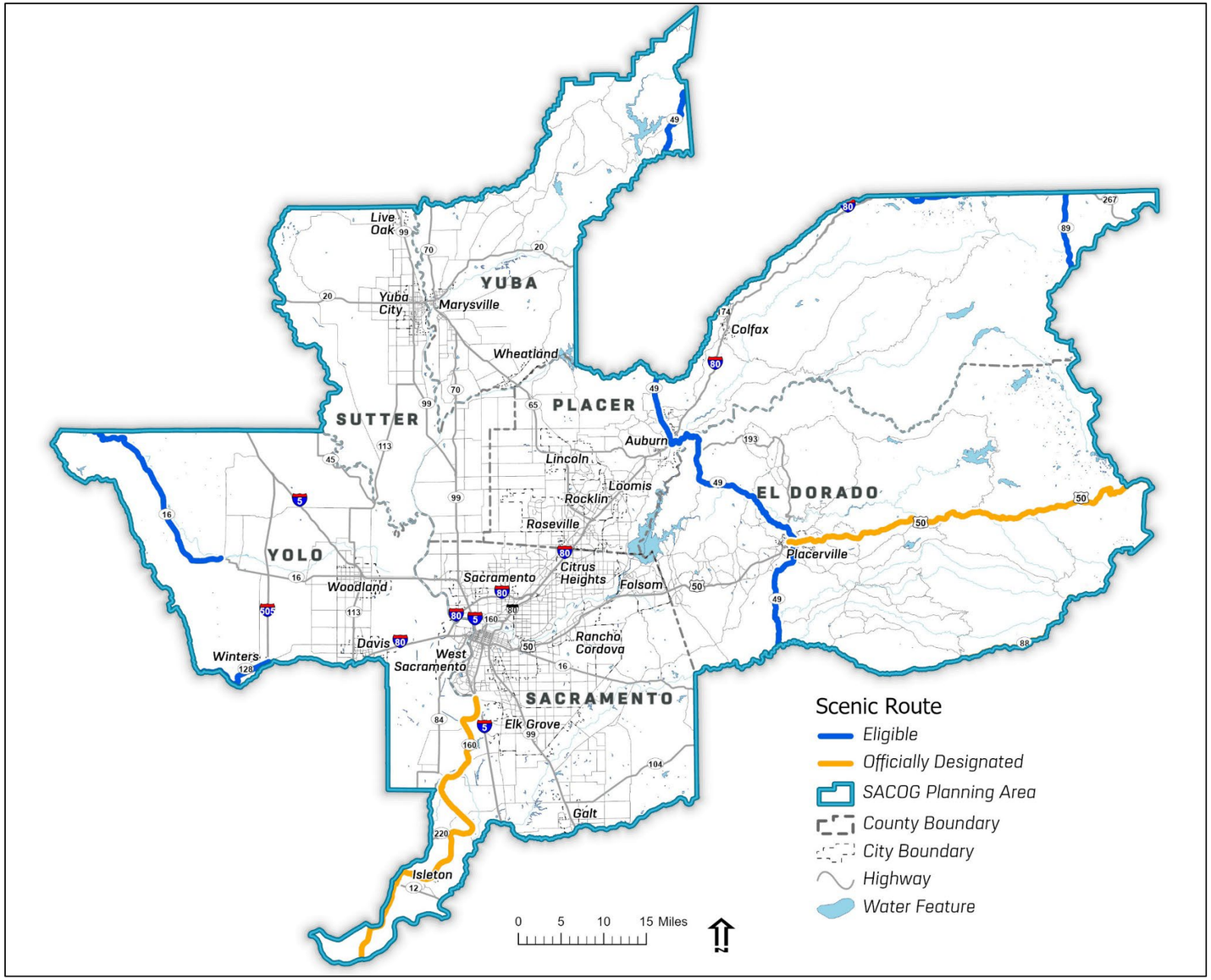
Rural areas tend to have narrower roads that cater to agricultural and goods movement traffic. Some rural roads in town centers or residential areas may have sidewalks and bicycle facilities, though widened shoulders are the more common pedestrian and bicyclist treatments. In more remote rural areas, the transportation system includes gravel or dirt roads.

As stated in the Regulatory Setting section above, California's Scenic Highway Program was created by the Legislature in 1963 with the purpose to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. Table 3.1-1 and Figure 3.1-2 show officially designated and eligible state scenic highways in the plan area. These designations represent recognition of the high scenic and visual qualities of these corridors. Specific design guidelines are required, and the officially designated corridors must be reviewed when improvements are proposed to determine if the highway will remain eligible for designation as a scenic corridor. Locally designated scenic roads and routes are also present throughout the plan area and are subject to local laws and regulations described in the applicable general plan as described in Section 3.1.1, "Regulatory Setting."



Source: Prepared by SACOG in 2025.

Figure 3.1-1 National Trails within the Plan Area



Source: Prepared by SACOG in 2025.

Figure 3.1-2 Official and Eligible State Scenic Highways in the Plan Area

Table 3.1-1 Official and Eligible State Scenic Highways

County	Highway	Location	Designation
El Dorado	SR 49 US 50	Countywide East of Placerville to SR 89	Eligible State Scenic Highway Official State Scenic Highway
Placer	SR 49 Interstate 80 SR 89	Countywide SR 20 to Truckee Countywide	Eligible State Scenic Highway Eligible State Scenic Highway Eligible State Scenic Highway
Sacramento	SR 160	Along the Sacramento River	Official State Scenic Highway
Sutter	None	None	None
Yolo	SR 16 SR 128	From SR 20 at north County border to west of Interstate 505 at Capay Countywide	Eligible State Scenic Highway Eligible State Scenic Highway
Yuba	SR 49	From the Yuba County Line to the Yuba Summit	Eligible State Scenic Highway

Source: Caltrans 2019.

In addition to roadways and freeways, rail lines also contribute to the region's urban form. The region has two types of rail systems, light rail and heavy rail, and each has different implications for urban form and community character. The primary function of the heavy gauge rail system is to transport freight cargo, but there is also some regional passenger rail on this system via Amtrak. Given their cargo function, the heavy rail lines tend to be located adjacent to industrial and warehouse type uses whose design character is utilitarian and scaled for train and truck traffic and large-scale storage and manufacturing operations; but heavy rail lines are also found in urbanized core areas throughout the region.

Light rail systems, on the other hand, are for public transit and are intended to attract people and to serve populated destinations. The light rail system is designed to be more integral to the urban fabric, typically located in downtowns where light rail lines are located in the center of active streets. Thus, unlike the heavy rail lines that create edges and barriers within the community, light rail lines can function as focal features around which development and people congregate since light rail lines occupy less footprint and are more flexible in routing, light rail stations can be constructed in higher density areas, and transit-oriented developments can be better supported without freight and long-distance operations that are common along heavy rail lines. The high-density, mixed-use development in the Sacramento downtown area is indicative of light rail's potential to influence urban form and character. Refer to Section 3.16, "Transportation," for a more thorough discussion and exhibits of the region's existing transportation network.

Trees and Forested Lands

The plan area is home to many native tree types, such as valley oak, blue oak, interior live oak, cottonwood, sycamore, and willow. Eastern Placer and El Dorado counties are almost completely forested, as is the northern tip of Yuba County. The plan area also includes numerous non-native species, which are generally used for ornamental value, shade production, resistance to particular pests, or proven adaptation to the urban environment. These trees also provide a visual break from the uniformity of development and can usually be found in housing developments, neighborhoods, and along local streets. The SACOG region includes urban forest areas with extensive tree landscaping throughout substantial portions of most communities.

Waterways

The plan area is home to a number of rivers, lakes, creeks, and man-made waterways. These include the American and Feather rivers, both of which converge on the Sacramento River, the state's largest and longest river, for eventual outlet into the San Francisco Bay.

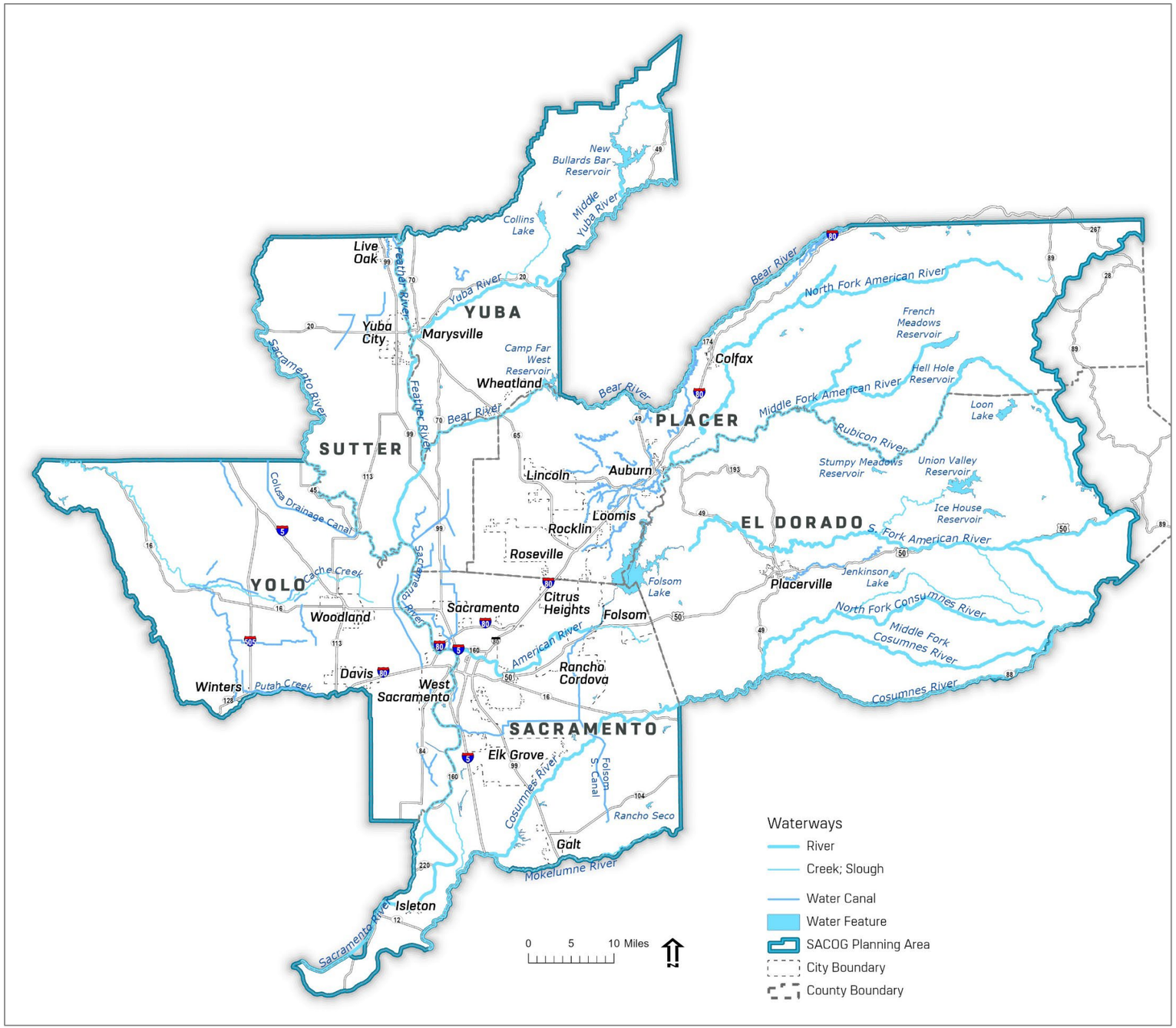
The American River Parkway borders the American River on both the northern and southern sides. The parkway is one of Sacramento County's most visited and distinctive natural visual features and provides several scenic based activities (e.g., picnic sites, guided natural and historic tours, bird watching, and hiking). Portions of the American River are protected under the Wild and Scenic Rivers Act, including the segment from the confluence with the Sacramento River to the Nimbus Dam. Other protected segments of the American River lie outside the plan area. See Section 3.1.1, "Regulatory Setting," for more information about the Wild and Scenic Rivers Act.

Other major rivers in the plan area include:

- Bear River in southern Yuba County and northern Placer County;
- Cache Creek, entering Yolo County from the northwest and roughly paralleling SR 16;
- Cosumnes River in southern El Dorado and Sacramento counties;
- Feather River, creating the eastern border of Sutter County and western border of Yuba County;
- Honcut Creek, a tributary of the Feather River;
- Mokelumne River, located in the Delta region of Sacramento County;
- Putah Creek, forming the boundary between Yolo and Solano counties;
- Rubicon River located in Placer County; and
- Yuba River in central Yuba County.

The plan area also includes a number of small creeks and lakes. Figure 3.1-3 shows the major waterways in the plan area.

In addition to the region's natural waterways, several manmade waterways contribute to the visual landscape. Folsom Lake, a reservoir formed by Folsom Dam and constructed in 1955 to control the American River, is one such example. Located at the base of the Sierra foothills, the lake and recreation area offers opportunities for hiking, biking, running, camping, picnicking, horseback riding, water-skiing, and boating. The Sacramento Deep Water Ship Channel, a canal from the Port of Sacramento to the Sacramento River, is another example of a man-made waterway. It was completed by the US Army Corps of Engineers in 1963.



Source: Prepared by SACOG in 2025.

Figure 3.1-3 Waterways in the Plan Area

3.1.3 Environmental Analysis

METHODOLOGY

This program-level analysis generally evaluates potential for the regional growth pattern and planned transportation network result in substantial adverse effects on visual resources in the plan area. The analysis is based on typical views and resources, informed by the most recent available information in January 2025.

The analysis does not attempt to address site-specific views, which are more appropriately considered in the context of future environmental documents prepared for specific transportation and/or development projects.

It is important to distinguish between public and private views. Private views are views seen from privately-owned land and are typically viewed by individual viewers, including views from private residences. Public views are experienced by the collective public. These include views of landscape features such as the Tower Bridge or the Sutter Buttes, as seen from public viewing spaces. Public views are considered when analyzing the visual impacts of implementing the 2025 Blueprint.

This approach, which considers "adverse impacts upon the environment of persons in general" rather than the effects on a particular person's view is supported by CEQA (PRC Section 21000 et seq.) case law (see *Association for Protection etc. Values v. City of Ukiah (1991) 2 Cal. App. 4th 720 [3 Cal. Rptr.2d 488]*).

Generally, with regard to aesthetic impacts, the greater the change from existing conditions, the more noticeable the change to the aesthetic environment. For example, the construction of a new roadway generally results in a greater amount of change to the existing aesthetic environment than the widening of an existing roadway. Likewise, greenfield development results in a greater amount of change to the existing aesthetic environment than infill development in an existing community. Therefore, the general approach in this impacts analysis is to determine how implementation of the 2025 Blueprint could change the aesthetic environment from existing conditions and whether that change would have a potentially significant adverse effect based on the following criteria for determining significance.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the project would have a significant adverse effect related to aesthetics, light, and glare if it would:

- have a substantial adverse effect on a scenic vista;
- substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- substantially degrade the existing visual character or quality of public views of the site and its surroundings;
- conflict with applicable zoning and other regulations governing scenic quality; or
- create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

ISSUES NOT DISCUSSED FURTHER

All of the topics identified in the significance criteria above are addressed in the following analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.1-1: Have a Substantial Adverse Effect on a Scenic Vista

Regional Growth and Land Use Change

Effects on scenic vistas from public viewing areas could occur if projects directly alter an important built or natural feature or are placed in a location and have bulk and scale such that long-range views of important features are obscured. Examples of regionally important scenic vistas include the downtown Sacramento skyline, the Sierra Nevada Range, agricultural lands and pastures, trees and forested lands, landmarks such as the Capitol Building, and the Sutter Buttes. Development and redevelopment projects that would be similar in size, style, or type to existing surrounding uses would typically not cause a substantial change to scenic vistas.

The 2050 growth forecast indicates that the population in the plan area is expected to grow by approximately 580,000 people, an increase of about 25 percent, between 2020 and 2050. The 2025 Blueprint emphasizes infill development in accordance with the adopted land use plans and zoning ordinances of the cities and counties in the plan area. These standards generally require project design that is consistent with the surrounding built environment, establish height maximums, and afford special protections to designated scenic areas. Policies related to preservation of resources provide assurance that the overall aesthetic of scenic resources, as viewed from key viewing locations, would be maintained.

Center and Corridor Communities often include historic downtown districts and other prominent architectural elements. Each community is unique. Scenic views in or from a community in Davis are different from those in Citrus Heights, downtown Sacramento, or Placerville. As described above, local land use policies and ordinances establish parameters for considering an individual project's potential to have a substantial adverse effect on a scenic vista that are tailored to the scenic vistas in the community. For further analysis of the potential for growth to cause a change in the significance of a historical resource, refer to Section 3.5, "Cultural Resources," of this Draft EIR.

As discussed above for Center and Corridor Communities, there are existing design standards in Established Communities that address the potential for new growth to directly alter an important built or natural feature or obscure long-range views of important features. Future development in Established Communities would generally blend in with existing commercial and residential development and would not likely change the typical views in these areas. However, project-level details, such as height and massing of future developments, as well as their locations in relation to scenic vistas, are not known at this time. Increased densities planned in the plan area means that growth could be accommodated in more compact housing types and attached homes, and may also push more new housing vertically, not horizontally. Some proposed development in these areas, specifically tall and large development projects, could add bulk, scale, and massing that could affect scenic vistas. new housing vertically, not horizontally. Some proposed development in these areas, specifically tall and large development projects, could add bulk, scale, and massing that could affect scenic vistas.

Areas designated as Developing Communities and Rural Residential Communities in the Development Pattern of the 2025 Blueprint may provide natural scenic vistas, such as pastureland, forested areas, and views of the Sierra Nevada Mountain range in the existing conditions. In Developing Communities, which are largely undeveloped areas where development would generally consist of new low- to medium-density development on vacant parcels, such development could be visually prominent from, or have an adverse effect on, scenic vistas. Additionally, the installation of above-ground communication and energy infrastructure in these areas could introduce new elements to the visual landscape that could affect existing views if not sited and designed appropriately. Rural Residential Communities would support approximately 1 percent of the regional growth in jobs and housing units through 2050. Because of the low-density makeup of Rural Residential Communities, it is unlikely that public views would be significantly altered from existing conditions. The regional growth pattern would not have a substantial effect on the scenic vistas within this community type.

Many local jurisdictions have general plan policies relating to the protection of scenic vistas. These policies may limit the amount or type of development in designated scenic corridors or require special design guidelines when developing in certain areas. Some scenic vistas or areas, such as the American River or State Capitol, are subject to

additional protections. Portions of the American River are protected under the Wild and Scenic Rivers Act, which protects the "aesthetic, scenic, historic, archaeologic, and scientific features" of the river. Views of the State Capitol are protected by the Capitol View Protection Ordinance of the City of Sacramento and Capitol View Protection Act in Government Code Sections 8162.5 – 8162.9. However, because scenic vistas are protected differently among the various jurisdictions in the plan area, it is possible that implementation of the 2025 Blueprint would have substantial adverse effects on scenic vistas.

Transportation Network Improvements and Programs

By 2050, a variety of planned transportation improvements would occur in the plan area, including new transit, non-motorized travel, and roadway projects in addition to ongoing improvements to transit operations and roadway maintenance. Most of the roadway, bicycle, and pedestrian infrastructure projects are improvements to existing facilities that would not substantially alter the aesthetic environment or adversely affect existing scenic vistas. Transportation infrastructure is already a dominant feature of the landscape in urbanized high-density areas. Planned transportation improvements to existing infrastructure are unlikely to significantly alter views from existing conditions.

Developed and more densely populated areas would see a variety of transportation improvements by 2050, including new High Occupancy Vehicle (HOV) lanes, auxiliary lanes, roadway widenings, bicycle and pedestrian infrastructure improvements, transit facilities, increased transit service, and roadway maintenance and rehabilitation projects. Transit service would include increased frequency on local fixed route buses, major increases in light rail service, new streetcar service, and more express bus service. Regional transit development such as expansion of light rail is proposed largely within urban areas, surrounded by existing high-density housing and employment development. As such, it is not expected that expansion of rail would result in adverse impacts on scenic vistas. However, public views of scenic vistas could be impeded where sound walls are constructed to address noise or toxic air contaminants associated with major roadway improvement projects. In urbanized areas, where the majority of planned transportation improvements would occur, most roadway and other transportation improvements would not noticeably affect scenic vistas.

In developing and rural areas, where transportation infrastructure is less prevalent, implementation of the 2025 Blueprint could create new views of scenic vistas by allowing travelers to gain new vantage points of scenic vistas and landscape features. For instance, bicycle improvements, especially Class I bicycle paths, may create new views of scenic vistas that were previously unavailable. However, above-grade transportation infrastructure, such as bridges and overpasses in undeveloped areas, could introduce mass and scale that would adversely affect existing views from existing roadways, bicycle paths, and pedestrian facilities.

Summary

Implementation of the 2025 Blueprint, including regional growth, land use changes, and planned transportation improvements, could result in vertical growth in urbanized areas and some new development and transportation facilities in less urbanized and rural areas that could adversely affect views of scenic vistas. Therefore, impacts would be **potentially significant**.

Mitigation Measures

SACOG does not have the authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measures or other comparable measures identified by the lead agency at a project-level would reduce potential impacts on scenic vistas, and agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081).

Mitigation Measure 3.1-1: Protect Public Views of Important Scenic Vistas, Scenic Resources Along State Scenic Highways, and Visual Character and Quality

The implementing agency shall protect public views of important scenic vistas, scenic resources, and visual character and quality by taking the following (or equivalent) actions for projects that would significantly affect such resources:

- require that the design of new development provide appropriate transitions in building height and bulk that are sensitive to the physical and visual character of adjoining neighborhoods that have lower development intensities and building heights;
- ensure building heights stepped back from sensitive adjoining uses to maintain appropriate transitions in scale and to protect scenic vistas;
- avoid siting electric towers, solar power facilities, wind power facilities, communication transmission facilities and/or above ground lines along scenic roadways and routes, to the maximum extent feasible;
- reduce visual effects of projects and activities such that they do not obscure, detract from, or substantially negatively affect the quality of views from designated scenic roadways or scenic highways through project design changes; and
- comply with other local general plan policies and regulations related to the protection of public views of important scenic vistas, scenic resources along a state scenic highway, and visual character and quality.

Mitigation Measure 3.1-2: Design River Crossings to Minimize Aesthetic and Visual Impacts to the Greatest Feasible Extent

The implementing agency shall design river crossings to protect public views of important scenic vistas, scenic resources along a state scenic highway, and visual character and quality. Such design elements could include:

- scale, features, and dimensions that are architecturally pleasing and contextually appropriate for the adjacent neighborhoods;
- sizing that meets but does not exceed the capacity of the approach roadway; and
- design elements that obscure, detract from, or negatively affect the quality of views from public viewing areas shall be prohibited.

Significance after Mitigation

With the implementation of Mitigation Measures 3.1-1 and 3.1-2 listed above, public views of scenic resources would be protected because obstructions associated with the implementation of the 2025 Blueprint would be limited and river crossings would be designed to minimize aesthetic and visual impacts. The mitigation measures above, if implemented, would reduce Impact 3.1-1 to a less-than-significant level. However, SACOG cannot require the implementing agency to adopt these mitigation measures, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Even if the implementing agency adopts these mitigation measures, Impact 3.1-1 would remain potentially significant. Therefore, Impact 3.1-1 would be **significant and unavoidable** for purposes of this program-level review.

Impact 3.1-2: Substantially Damage Scenic Resources, Including, but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings Along a State Scenic Highway

Regional Growth and Land Use Change

Effects on scenic resources including along a state scenic highway could occur if projects directly alter important built or natural features such as trees, rock outcroppings, and historic buildings along a state scenic highway or are placed in a location and have bulk and scale such that views of these features are obscured. As discussed in Section 3.1.2, official state scenic highways in the plan area include US 50 east of Placerville to SR 89, and SR 160 along the Sacramento River. Eligible state scenic highways in the plan area include SR 49 throughout El Dorado County, SR 16

from SR 20 at the north border of Yolo County to west of Interstate 505 at Capay, and SR 49 from the Yuba County line to the Yuba Summit.

Regional development and redevelopment projects that would be located within the viewshed of official state scenic highways or obstruct views from official state scenic highways could damage scenic resources within state scenic highways, if they add significant bulk, mass, and scale to the areas. Additionally, implementation of the 2025 Blueprint could result in the conversion of previously undeveloped land in such a way that views from state scenic highways could be affected.

Development along officially designated state scenic highway corridors is unlikely to result in developmental changes that would damage scenic resources, such as trees, rock outcroppings, and historic buildings, largely due to Corridor Protection Programs that safeguard scenic corridors from encroaching development. In addition to Caltrans' regulations, many local jurisdictions have their own general plan policies relating to the protection of scenic resources that control the size and scale of land development to maintain visual compatibility with the natural and built environments. These policies may limit the amount or type of development in designated scenic corridors or require special design guidelines when developing in certain areas. However, because scenic resources are protected differently among the various jurisdictions in the plan area and because two official scenic highways and five eligible scenic highways are located within the plan area, it is possible that implementation of the 2025 Blueprint could damage scenic resources along state scenic highways.

Transportation Network Improvements and Programs

The 2025 Blueprint includes projects along state scenic highways. Table 3.1-2 provides a list of the 2025 Blueprint projects located along designated and eligible scenic highways in the plan area. Additional transportation-related projects proposed, such as bicycle paths and other roadway improvements may occur within or be visible from state scenic highways. As discussed above, most jurisdictions have general plan policies and associated regulations, in addition to Caltrans' regulations, relating to the protection of scenic resources.

Table 3.1-2 2025 Blueprint Projects Along Designated and Eligible Scenic Highways

County	Highway	2025 Blueprint Projects[1]
El Dorado	SR 49 (countywide), eligible US 50 (east of Placerville to SR 89), designated	▶ Install Animal Vehicle Collision Avoidance Systems-Hwy 49 and US 50 ▶ On Route 50, at various locations: Install Traffic Management System (TMS) Elements. ▶ On SR 50 install deer crossing flashing beacons at various locations. ▶ Replace Snow Road Undercrossing on US 50 about 7 miles east of Placerville. ▶ Identification of various Intelligent Transportation System improvements along US 50; projects may include upgrading all controllers, building the communications infrastructure, adding CCTVs, adding DMS, connecting all the signals.
Placer	SR 49 (countywide), eligible Interstate 80 (SR 20 to Truckee), eligible SR 89 (countywide), eligible	▶ SR 49 pavement rehabilitation. ▶ In the City of Auburn and County of Placer, Along SR 49 from I-80 to Dry Creek Road: Construct sidewalks and Americans with Disabilities Act (ADA) curb ramps at various locations and implement a Safe Routes to School program at six area schools. ▶ On SR 49 in Auburn, from 0.2 mile south of Lincoln Way/Borland Avenue to Lincoln Way/Borland Avenue: Realign roadway and construct roundabout. ▶ On SR 49 near Auburn, from Dry Creek Road to 0.1 mile south of Lorenson Road; also from 0.3 mile north of Lone Star Road to Nevada County line: Rehabilitate roadway and drainage systems, and upgrade guardrail, TMS elements, and facilities to ADA ▶ Add dual left turn lanes on SR 49 approaching the Dry Creek Road intersection and Willow Creek Drive intersection. Add northbound right turn lanes at Bell Road. ▶ Add turnouts, pullouts, and shoulders to SR 49. ▶ SR 49 Operational Improvements: traffic monitoring stations, closed circuit television, highway advisory radio, changeable message signs, and other system management infrastructure.

County	Highway	2025 Blueprint Projects[1]
		▶ On I-80 near Emigrant Gap: Rehabilitate roadway, construct truck climbing lanes in EB direction, widen shoulders, replace or widen structures, upgrade median barrier and TMS elements. ▶ Add truck climbing lanes on I-80. ▶ Widen SR 89 to add a transit-only lanes in each direction adjacent to existing lanes and also include a paved shoulder/emergency pullouts on both sides. ▶ SR 89, upgrade intersections to include transit signal priority and queue jump lanes, from Truckee to Alpine Meadows Road. ▶ On SR 89 near Truckee, from 0.8 mile north of Alpine Meadows Road to Nevada County line (PM 13.1/21.667); also in Nevada County in Truckee, from Placer County line to Route 80 (PM 0.0/0.5): Rehabilitate pavement and drainage systems, upgrade facilities to ADA standards, and upgrade guardrail and TMS elements.
Sacramento	SR 160 (along the Sacramento River), designated	▶ Pavement rehabilitation from Route 12 to approximately 0.1 mile north of Poverty Rd. ▶ Replace truss bridge lift system electrical and mechanical equipment, construct sidewalks at Three Mile Slough bridge to provide access from roadway shoulder onto bridge and upgrade MBGR, install TMS count stations, communication, camera, and bridge instrumentation; provide MVPs for bridge operators.
Yolo	SR 16 (from SR 20 at north County border to west of Interstate 505 at Capay), eligible SR 128 (countywide), eligible	▶ SR 16 pavement rehabilitation. ▶ Where ROW permits, construct Class II bike lane on SR 128 from Valley Oak Dr. to E. Main St., Winters. ▶ Intersection controls on SR 128 in Winters.
Yuba	SR 49 (from Yuba County Line to the Yuba Summit), eligible	None

[1] Illustrative project list includes most projects within the eligible or designated portion of the highway

Source: Data compiled by Ascent from the list of transportation projects adopted by SACOG in 2024.

As shown in Table 3.1-2, which provides an illustrative but not comprehensive project list, there are numerous projects located within the designated or eligible portion of the scenic highways in the plan area. These projects would occur along the already-developed highways and are unlikely to result in substantial change to the existing transportation infrastructure. As such, they are unlikely to have significant impacts on the surrounding views that render the highways eligible.

Development along officially designated state scenic highway corridors is unlikely to result in changes that would damage scenic resources, such as trees, rock outcroppings, and historic buildings, largely due to Corridor Protection Programs that safeguard scenic corridors from encroaching development. In addition to Caltrans' regulations, many local jurisdictions have their own general plan policies relating to the protection of scenic resources. These policies may limit the amount or type of development in designated scenic corridors or require special design guidelines when developing in certain areas.

Transit improvements under the 2025 Blueprint include transit service improvements such as increasing service on existing fixed routes and bus lines would take place within areas already developed as transportation infrastructure and, thus, would not result in damage to scenic resources along a state scenic highway. Regional transit development includes new and expanded bus and rail intended to better connect housing with employment areas. New and expanded bus facilities would typically be installed within existing paved rights of way and would not be visually inconsistent with existing facilities. New or extended rail lines would primarily occur within areas that are mostly developed; any new rail lines that would pass through undeveloped areas would generally be constructed along existing roadways, such that the new rail would be visually consistent with the existing transportation infrastructure. As such, it is not expected that expansion of rail would result in damage to scenic resources along a state scenic highway.

Therefore, most of the transportation projects in the 2025 Blueprint would be associated with existing transportation infrastructure. Where the projects either directly affect a scenic highway or could adversely affect views from a scenic

highway, the design of the project would typically be subject to a design review to limit the effects in a manner consistent with state and local policies. However, because scenic resources are protected differently among the various jurisdictions in the plan area, it is possible that implementation of the transportation network improvements and programs could damage scenic resources along state scenic highways.

Summary

As discussed above, implementation of planned improvements and development projects could adversely affect scenic resources along state scenic highways. Therefore, impacts would be **potentially significant**.

Mitigation Measures

SACOG does not have the authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measure or other comparable measure identified by the lead agency at a project-level would reduce potential impacts on scenic resources along state scenic highways, and agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081).

Implement Mitigation Measure 3.1-1: Protect Public Views of Important Scenic Vistas, Scenic Resources Along State Scenic Highways, and Visual Character and Quality

Significance after Mitigation

With implementation of Mitigation Measure 3.1-1, public views of scenic resources would be protected because obstructions caused by the 2025 Blueprint development would be limited. If the implementing agency adopts this mitigation measure, Impact 3.1-2 would be reduced to a less-than-significant level. However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, Impact 3.1-2 would be **significant and unavoidable** for purposes of this program-level review.

Impact 3.1-3: Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and Its Surroundings in Non-Urbanized Areas

Regional Growth and Land Use Change

As discussed above, the majority of development under the 2025 Blueprint would occur as infill development in Center and Corridor Communities and Established Communities, in accordance with the adopted land use plans and zoning ordinances of the cities and counties in the plan area. Infill development is generally aesthetically beneficial at the regional scale, as it occurs in existing urbanized areas already designated for and receiving growth and can reduce pressures for growth in undeveloped and/or agricultural and rural areas. As described further in Impact 3.1-4, development projects in these areas are evaluated for consistency with regulations governing scenic quality.

Currently, typical views in rural and non-urbanized areas include some developed features like low-density office and commercial development and some transportation infrastructure, but views in these areas are still largely dominated by residential uses and often look out over vacant land and open space. The type of development described in Chapter 2, "Project Description," could change typical views in these areas by adding a visual element of urban character to an existing rural or open space and could increase the density and intensity of existing suburban or rural environments. In Developing Communities, implementation of the 2025 Blueprint could result in the conversion of previously undeveloped land to urban uses in such a way as to substantially degrade the existing visual character or quality of public views of sites and their surroundings.

The introduction of proposed low- to medium-density development in largely undeveloped, non-urbanized areas would add bulk, scale, and massing in areas that are non-urbanized, which could be visually prominent compared to the existing landscape. This could degrade existing visual character and/or quality of public views in non-urbanized areas. However, as discussed above, many local jurisdictions have general plan policies and associated regulations governing the protection of visual character and quality. These policies may limit the amount or type of development in public view corridors or require special design guidelines to maintain or enhance existing visual character and quality.

Transportation Network Improvements and Programs

The 2025 Blueprint includes planned transportation improvements to existing facilities such as road widenings, intersection or interchange improvements, intelligent transportation system upgrades, turn pockets, HOV lanes, auxiliary and transition lanes, and other improvements. Other planned transportation improvements include improvements to the existing transit system, some expansion of rail, and improvements to bicycle paths.

Rural areas and non-urbanized areas would typically see more road widening projects and newly constructed road projects to serve the new residential and employment developments that would be built by 2050. In less developed, non-urbanized areas of the region, adding new transportation infrastructure would add an element of urban character to previously undeveloped lands. There may also be limited improvements to transit service in non-urbanized areas. While rural areas are generally not served by transit under existing conditions, new transit services would be added incrementally to align with the completion of new housing and employment centers. Pedestrian and bicycle infrastructure would be similarly phased in over the life of the 2025 Blueprint. These planned transportation improvements could result in degradation of existing visual character or quality of public views of sites and their surroundings in non-urbanized areas, but potential impacts would be dependent on the specific design and siting details of the planned improvement.

Summary

As discussed above, implementation of the 2025 Blueprint would result in regional growth, land use changes, and transportation improvements that could change the visual character or quality of public views of sites and their surroundings. In Developing Communities specifically, the change from rural or undeveloped views to urban or suburban land uses may be considered a degradation of the visual character or quality of the area. Depending on the nature and scale of the changes, implementation of the 2025 Blueprint would result in a **potentially significant** impact related to visual character or quality of public views.

Mitigation Measures

SACOG does not have the authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measure or other comparable measure identified by the lead agency at a project level would reduce impacts related to visual character or quality of public views (PRC Section 21081).

Mitigation Measure 3.1-3: Design Projects to be Visually Compatible with Surrounding Areas

The implementing agency shall require measures for projects that would significantly affect visual resources that minimize contrasts in scale and massing between the project and surrounding natural forms and developments. Strategies to achieve this may include:

- to the extent feasible, avoiding large cuts and fills when the visual environment would be substantially disrupted; disrupted;
- siting or designing projects to minimize their intrusion into important viewsheds;
- using contour grading to match surrounding terrain;
- developing transportation systems to be compatible with the surrounding environments (e.g., colors and materials of construction material; scale of improvements);
- avoiding the use of non-native landscaping; if exotic vegetation is used, it should be used as screening and landscaping that blends in and complements the natural landscape;
- protecting or replacing aesthetically significant trees in the project area;
- using grading that blends with the adjacent landforms and topography;
- landscaping new slopes and embankments with compatible grasses, shrubs, and trees to soften cuts and edges; and
- designing new structures to be compatible in scale, mass, character, and architecture with existing structures.

Significance after Mitigation

Even if the implementing agency adopts and implements Mitigation Measure 3.1-3, Impact 3.1-3 would remain potentially significant because Mitigation Measure 3.1-3 may not fully reduce impacts related to visual character or quality of public views. Project site conditions are unique, visual compatibility may not be achievable depending on the proposed use and the existing visual character of the site and surroundings. Further, Mitigation Measure 3.1-3 allows implementing agency discretion such that visual compatibility cannot be assured. Therefore, Impact 3.1-3 would be **significant and unavoidable** for purposes of this program-level review.

Impact 3.1-4: Conflict with Applicable Zoning and Other Regulations Governing Scenic Quality in Urban Areas

Regional Growth and Land Use Change

The majority of development under the 2025 Blueprint would occur as infill development, in accordance with the adopted land use plans and zoning ordinances of the cities and counties in the plan area. Future development under the projected land use pattern in Center and Corridor Communities and Established Communities would generally be consistent with existing commercial and residential development. Constructing taller buildings within urbanized and developed areas would contribute to the area's overall aesthetic value by introducing new architectural elements; however, project-level details, such as height and massing of future developments, are not known at this time. As discussed in Section 3.1.1, "Regulatory Setting," above, SB 743 eliminates the need to evaluate aesthetic impacts of a project if: (1) it is a residential, employment center, or mixed use project; (2) it is located within a TPA; (3) the project is consistent with a specific plan for which an environmental impact report was certified; and (4) it is consistent with an adopted SCS or alternative planning strategy or projects that meet these criteria, the impacts to the aesthetic environment would be considered exempt from this analysis.

Local jurisdictions in the plan area require that development projects comply with existing zoning and other applicable regulations, including those governing scenic quality, before issuing permits and approvals to land use projects. Furthermore, the growth patterns identified in the 2025 Blueprint are consistent with the land use and general plans of local jurisdictions. Therefore, the growth projections and land use changes assumed in the 2025 Blueprint are not expected to conflict with zoning or other regulations governing scenic quality in urban areas.

Transportation Network Improvements and Programs

Road, highway, transit, and bicycle improvements under the 2025 Blueprint would occur in Center and Corridor Communities and Established Communities where transportation infrastructure is a dominant feature of the landscape in baseline conditions. Maintenance projects would update and upgrade infrastructure in a way that could improve scenic quality. Road expansion projects could increase the visual dominance of the features and may require the construction of sound walls. In some cases, well-designed decorative sound walls can improve the aesthetic environment of a freeway or major roadway by adding an element of visual interest to the surrounding transportation infrastructure. New bike lanes and sidewalks that provide infrastructure connections can improve the aesthetics and accessibility of visual resources. Such planned transportation improvements would not likely degrade the existing visual character or quality of the region because the improvements would be required to comply with local regulations, including zoning, that govern scenic quality. Furthermore, the planned transportation improvements under 2025 Blueprint would be designed to be visually consistent with the existing visual environment and are, therefore, unlikely to conflict with applicable zoning and other regulations governing scenic quality.

Summary

As discussed above, the land use changes and transportation improvements associated with the implementation of the 2025 Blueprint would not conflict with existing zoning laws or other regulations because local agencies would require compliance with applicable regulations, including those governing scenic quality, before issuing permits for land use projects. Therefore, impacts would be **less than significant.**

Mitigation Measures

No mitigation is required for this impact.

Impact 3.1-5: Create a New Source of Substantial Light or Glare Which Would Adversely Affect Day or Nighttime Views in the Area

Regional Growth and Land Use Change

Implementation of the 2025 Blueprint would result in an increase of new development, which could increase the amount of light and glare and adversely affect day or nighttime views in the plan area. In Center and Corridor Communities and Established Communities, there are existing sources of light and glare. New growth in these communities would not substantially adversely affect day or nighttime views, since light and glare are already a dominant feature of the landscape.

In less developed areas of the region, where existing sources of light and glare are not as prevalent, new housing and employment projects could create new sources of light and glare. Any substantial new sources of light or glare could affect existing nighttime views. Lighting requirements are guided by standards set by local jurisdictions. In addition, many jurisdictions have general plan policies and other relevant regulations relating to the protection of night skies and the prevention of obtrusive lighting. Typical measures include the use of downward-directed and shielded lighting. New development would be required to comply with the applicable lighting standards, and the location, type, and direction of the lighting. A lighting plan is typically required to be submitted to planning departments during the development review process. However, adherence to lighting standards may not be applicable to all types of development projects, and light and glare impacts may occur in some areas.

Transportation Network Improvements and Programs

The planned improvements to existing roadways and highways would not significantly increase the amount of light and glare, as these improvements would take place on existing facilities that have existing lighting. The marginal increases in light and glare from additional vehicle headlights, new reflective signage, new streetlights, new intersection control devices, and other improvements would be less than significant when considered at the regional level.

Implementation of the 2025 Blueprint would also result in the construction of transportation improvement projects that could increase the amount of light and glare, particularly rural areas. Investments in new transportation facilities could increase the amount of light and glare in an area if additional vehicles and additional streetlights, intersection control devices, reflective signage, and reflective roadway materials would adversely affect day or nighttime views. During the daytime, additional vehicles could increase the amount of glare in an area, and at night additional vehicle headlights could increase the amount of light in an area where previously no sources of transportation light and glare existed. Thus, planned transportation improvements could potentially introduce light and glare to areas where previously no sources of light and glare existed, resulting in new sources of substantial light and glare that could be considered substantial.

Implementation of the 2025 Blueprint would include additional miles of Class I and Class II bicycle facilities. There is some possibility that bicycle facility projects could install safety lights that may slightly increase the amount of light in an area, but such increases would be minimal and provide safety enhancements that would not significantly affect day or nighttime views in the area. Overall, the increases in light and glare from new bicycle facilities would be minimal.

As for light rail, increasing the number of route miles could increase the amount of light and glare in certain areas, especially where new stations are constructed. The proposed alignments for the Green Line light rail extension and Sacramento-West Sacramento transit connection are along urbanized corridors. The incremental increase in the amount of light and glare generated from increases in streetcar and light rail route miles would not differ substantially from existing conditions.

Therefore, improvements to existing facilities and the construction of many projects including trails and light rail expansions, would not be expected to substantially contribute to light and glare that would adversely affect day or nighttime views. Where new transportation facilities are constructed in areas that do not have existing sources of light or glare, however, there is a potential that these projects could create a new source of substantial light or glare.

Summary

Overall, the land use changes that occur to accommodate the regional growth pattern and the identified transportation projects could generate light and glare that adversely affect views in the plan area. For the reasons described above, impacts of light and glare from the implementation of the 2025 Blueprint would be **potentially significant**.

Mitigation Measures

SACOG does not have the authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measures or other comparable measures identified by the lead agency at a project level would reduce potential impacts related to glare and light, and agencies with jurisdiction to adopt these measures should do so (PRC Section 21081).

Mitigation Measure 3.1-4: Reduce Sun Glare Resulting from Implementation of Planned Transportation Improvements

The implementing agency shall require measures that would minimize and control glare from planned transportation improvements that would result in significant glare impacts through the adoption of project design features that reduce glare. These features include:

- planting trees along transportation corridors to reduce glare from the sun;
- creating tree wells in existing sidewalks;
- adding trees in new curb extensions and traffic circles;
- adding trees to public parks and greenways; and
- landscaping off-street parking areas, loading areas, and service areas.

Tree species planted to comply with this measure shall provide significant shade cover when mature. Utilities shall be installed underground along these routes wherever feasible to allow trees to grow and provide shade without need for severe pruning.

Mitigation Measure 3.1-5: Design Structures to Avoid or Reduce Impacts Resulting from Sun Glare

The implementing agency shall require measures that would minimize and control glare from implementation of the projected land use pattern and planned transportation improvements through the adoption of project design features that reduce glare for projects that would cause significant glare impacts. These features include:

- limiting the use of reflective materials, such as metal;
- using non-reflective material, such as paint, vegetative screening, matte finish coatings, and masonry;
- screening parking areas by using vegetation or trees;
- using low-reflective glass; and
- complying with applicable general plan policies or local controls related to glare.

Mitigation Measure 3.1-6: Design Structures to Avoid or Reduce Impacts Resulting from Nighttime Light and Glare

The implementing agency shall impose lighting standards on projects that would cause significant nighttime light and glare impacts that ensure that minimum safety and security needs are addressed and minimize light trespass and glare. These standards include the following:

- minimizing incidental spillover of light onto adjacent private properties and undeveloped open space,
- directing luminaries away from habitat and open space areas adjacent to the project sites,
- installing luminaries with a minimum Color Rendering Index rating of 90 which provides good color rendering and natural light qualities, and

- minimizing the potential for back scatter into the nighttime sky and for incidental spillover of light onto adjacent private properties and undeveloped open space.

Significance after Mitigation

If the implementing agency adopts Mitigation Measures 3.1-4 through 3.1-6, new development, including planned transportation improvements, and redevelopment would minimize additions to existing lighting sources and glare in urbanized areas and would minimize the introduction of new light sources and glare in non-urbanized areas. Implementation of Mitigation Measures 3.1-4 through 3.1-6 would reduce light and glare impacts to a less-than-significant level. However, because SACOG cannot require the implementing agency to adopt these mitigation measures, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation, this impact would be **significant and unavoidable** for purposes of this program-level review.

3.2 AGRICULTURE AND FORESTRY RESOURCES

This section evaluates the potential agricultural and forestry resources impacts of the proposed 2025 Blueprint. The existing agriculture and forestry resources characteristics are described and the relationship between the proposed project and existing plans and policies are addressed. The potential loss of agricultural and forestry resources is also addressed. SACOG did not receive comments related to agricultural and forestry resources in response to the notice of preparation.

3.2.1 Regulatory Setting

FEDERAL

Farmland Protection Policy Act of 1981

The Farmland Protection Policy Act (FPPA) (7 USC Section 4201, et seq.) is administered by the Natural Resources Conservation Service (NRCS). NRCS maps soils and farmland to provide comprehensive information necessary for understanding, managing, conserving, and sustaining the nation's limited soil resources. The FPPA is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to non-agricultural uses. It assures that federal programs are administered to be compatible with state, local government, and private programs and policies to protect farmland to the extent possible. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every 2 years. For the purpose of the FPPA, farmland includes Prime Farmland, Unique Farmland, and Land of Statewide or Local Importance, defined below. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.

Prime Farmland

Prime Farmland is land that has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming methods. Prime Farmland must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use.

Farmland of Statewide Importance

Farmland of Statewide Importance is land other than Prime Farmland which has a good combination of physical and chemical characteristics for the production of crops. It must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use.

Unique Farmland

Unique Farmland is land that does not meet the criteria for Prime Farmland or Farmland of Statewide Importance, which has been used for the production of specific high economic value crops at some time during the 4 years prior to the mapping date. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality and/or high yields of a specific crop when treated and managed according to current farming methods. Examples of such crops may include oranges, olives, avocados, rice, grapes, and cut flowers. It does not include publicly owned lands for which there is an adopted policy preventing agriculture use.

Farmland of Local Importance

Farmland of Local Importance is either currently producing crops, has the capability of production, or is used for the production of confined livestock. Farmland of Local Importance is land other than Prime Farmland, Farmland of

Statewide Importance, or Unique Farmland. This land may be important to the local economy due to its productivity or value. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use.

Federal Farm Bill of 1990 – Federal Forest Legacy Program

The federal Forest Legacy Program (FLP) (16 USC Section 2103c) was part of the 1990 Federal Farm Bill. The purpose of the FLP is to protect environmentally important forest land under private ownership from conversion to non-forest uses, such as residential or commercial development. The FLP promotes the use of voluntary conservation easements on these properties. Landowners who wish to participate may sell or transfer particular rights, such as the right to develop the property or to allow public access, while retaining ownership of the property and the right to use it in any way consistent with the terms of the easement. The agency or organization holding the easement is responsible for managing the rights it acquires and for monitoring compliance by the landowner. Forest management activities, including timber harvesting, hunting, fishing, and hiking are encouraged, provided they are consistent with the program's purpose.

The Farm and Ranch Land Protection Program

The Farm and Ranch Land Program provides matching funds to help purchase development rights to keep productive farm and ranchland in agricultural uses. Working through existing programs, the US Department of Agriculture (USDA) partners with state, tribal, or local governments and nongovernmental organizations to acquire conservation easements or other interests in land from landowners. USDA provides up to 50 percent of the fair market easement value of the conservation easement. To qualify, farmland must be part of a pending offer from a state, tribe, or local farmland protection program; be privately owned; have a conservation plan for highly erodible land; be large enough to sustain agricultural production; be accessible to markets for what the land produces; have adequate infrastructure and agricultural support services; and have surrounding parcels of land that can support long-term agricultural production. NRCS manages the program.

STATE

Farmland Mapping and Monitoring Program

In 1982, the State of California created the Farmland Mapping and Monitoring Program (FMMP) within the California Department of Conservation (DOC) to carry on the mapping activity from NRCS. The FMMP is a non-regulatory program that provides consistent and impartial analysis of agricultural land use and land use changes throughout California for use by decision-makers in assessing present status, reviewing trends, and planning for the future of California's agricultural land resources. The FMMP produces Important Farmland Maps, which are a hybrid of resource quality (soils) and land use information. The FMMP is the primary system by which the extent, distribution, and quality of farmland is evaluated and monitored. Maps of Important Farmland are prepared periodically (approximately every 2 years) by the FMMP for most of the state's agricultural regions, based on soil survey information and land inventory and monitoring criteria developed by NRCS.

The classification system employed by FMMP consists of eight mapping categories: five categories of agricultural lands and three categories of nonagricultural lands. The characteristics of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance are summarized above under the Farmland Protection Policy Act of 1981, while the remaining four categories are summarized below.

Grazing Land

Grazing lands are lands on which the existing vegetation is suited to the grazing of livestock.

Urban and Built-Up Land

This category describes 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. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

Other Land

This category encompasses land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; vacant and nonagricultural land surrounded on all sides by urban development; confined livestock, poultry, or aquaculture facilities; strip mines; borrow pits; and water bodies smaller than 40 acres.

Water

This category describes perennial bodies of water with an extent of at least 40 acres.

The California Land Conservation Act (Williamson Act) of 1965

The Williamson Act (Gov. Code Section 51200–51207) was enacted by the California State Legislature in 1965 to encourage the preservation of agricultural lands. The Williamson Act program permits property tax adjustments for landowners who contract with a city or county to keep their land in agricultural production or approved open space uses for at least 10 years. Lands covered by Williamson Act contracts are assessed on the basis of their agricultural value instead of their potential market value under nonagricultural uses.

Williamson Act contracts historically had a term of 10 years or more with renewal occurring automatically each year. Sacramento and Sutter Counties participate in Williamson Act contracts. The Farmland Security Zone (FSZ) program added to the Williamson Act in 1998 offers landowners greater property tax reduction in return for an initial contract term of 20 years, with renewal occurring automatically each year. El Dorado, Placer, and Yolo Counties participate in the FSZ contracts. Yuba County does not participate in the Williamson Act program. AB 1265 (Chapter 90, Statutes of 2011) decreased the duration of the Land Conservation Act and FSZ contracts by 1 and t2 years, respectively.

The filing of a non-renewal application by a landowner ends the automatic annual extension of a contract and starts a 9-year phase-out of the contract. During the phase-out period, the land remains restricted to agricultural and open space uses, but property taxes gradually return to levels associated with the market value of the land. At the end of the 9-year non-renewal process, the contract expires, and the owner's uses of the land are restricted only by applicable local zoning.

The Williamson Act defines compatible use of contracted lands as any use determined by the county or city administering the preserve to be compatible with the agricultural, recreational, or open-space use of land within the preserve and subject to contract (Gov. Code Section 51202[e]). However, uses deemed compatible by a county or city government must be consistent with the principles of compatibility set forth in Government Code Sections 51231, 51238, or 51238.1.

Z'Berg-Nejedly Forest Practice Act of 1973

The Z'berg-Nejedly Forest Practice Act (Forest Practice Act) (PRC, div. 4, ch. 8) established a nine-member Board of Forestry whose mandate is to assure the best economic and environmental practices in timber production in California. The board requires that a Registered Professional Forester prepare a timber harvest plan (THP) before harvesting timber on most non-federal forestland. The goal of the THP is to assure that the continual productivity of timberlands is sustained and enhanced by the timber harvesting that takes place on the site, and that related resources are protected to the extent feasible, including watersheds, fisheries, wildlife, recreation, aesthetics, and employment in the region.

Z'berg-Warren-Keene-Collier Forest Taxation Reform Act of 1976 – Timberland Production Zones

Under the Forest Taxation Reform Act (Gov. Code Section 51110-51119.5), counties must provide for the zoning of land used for growing and harvesting timber as Timberland Preserve Zones (TPZ). A TPZ is a 10-year restriction on the use of timberland, similar to the Williamson Act for agricultural lands. Land use under a TPZ is restricted to growing and harvesting timber or to compatible uses. In return, taxation of timberland under a TPZ is based only on such restrictions in use.

The Right to Farm Act of 1981

The Right to Farm Act (Civ. Code Section 3482.5) is designed to protect commercial agricultural operations from nuisance complaints that may arise when an agricultural operation is conducting business in a "manner consistent with proper and accepted customs." The code specifies that established operations that have been in business for 3 or more years that were not nuisances at the time they began shall not be considered a nuisance as a result of new land use.

California Timberland Productivity Act of 1982

The California Timberland Productivity Act (CTPA) (Gov. Code Sections 51100–51104) describes the powers and duties of local government in protecting timberlands. The law is designed to maintain an optimum amount of timberland, ensuring its current and continued availability by establishing TPZs on all qualifying timberland, which restrict land use to growing and harvesting timber and other compatible uses. The act discourages premature or unnecessary conversion of timberland to urban or other uses and expansion of urban services into timberland, and encourages investment in timberlands based on reasonable expectation of harvest. The CTPA also provides that timber operations conducted in accordance with California forest practice rules shall not be restricted or prohibited due to land uses in or around the location of the timber operations.

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000

The Cortese-Knox-Hertzberg Local Government Reorganization Act (Gov. Code Section 56000 et seq.) established procedures for local government changes of organization, including city incorporations, annexations to a city or special district, and city and special district consolidations. This act requires that development or use of land for uses other than open space 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.

Oak Woodlands Conservation Act of 2004

The Oak Woodlands Conservation Act of 2004 (PRC Section 21083.4) provides funding for the conservation and protection of California's oak woodlands. It requires counties, in determining whether CEQA requires an environmental impact report, negative declaration, or mitigated negative declaration, to determine whether a project in its jurisdiction that may result in a conversion of oak woodlands poses a significant effect on the environment. If a potentially significant effect is identified, the act requires implementation of one or more specified mitigation alternatives to mitigate the conversion of oak woodlands. By imposing new duties on local governments with respect to oak woodlands mitigation, the bill imposes a state-mandated local program.

Five of the six counties within the plan area have adopted Oak Woodland Management Plans. Additionally, Sacramento County addresses the protection of oak woodlands in its tree preservation ordinances.

California Forest Legacy Act of 2007

Similar to the Federal Forest Legacy Program, the California Forest Legacy Act (PRC Section 12220[G]) is a California Department of Forestry and Fire Protection (CAL FIRE) program to promote conservation easements in environmentally sensitive forest areas. Money to fund the program is obtained from gifts, donations, federal grants and loans, other appropriate funding sources, and from the sale of bonds pursuant to Proposition 12, the Safe Neighborhood Parks, Clean Water, Clean Air, and Coastal Protection Bond Act (The Villaraigosa-Kelley Act) of 2000 (PRC div. 5, ch. 1.692).

This act defines "forest land" as "land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."

CAL FIRE Fire and Resource Assessment Program

CAL FIRE's Fire and Resource Assessment Program assesses the amount and extent of California's forest and rangelands. The program analyzes their condition and identifies alternative management and policy guidelines. The assessment links

together state requirements for natural resource inventories and strategies and the federal government's desire to rely more heavily on these state programs in determining priorities for funding (CAL FIRE 2012).

California Farmland Conservancy Program Act of 2010

The California Farmland Conservancy Program Act (PRC Section 10200 et seq.), also known as SB 1142 (Stats. 2010, ch. 323), established the California Farmland Conservancy Program (CFCP), which provides grants for agricultural conservation easements. An agricultural conservation easement aims to maintain agricultural land in active production by preventing development on the subject parcel and prohibiting practices that would damage or interfere with the agricultural use of the land. Because the easement is a restriction on the deed of the property, the easement remains in effect even when the land changes ownership. While other benefits may accrue because the land is not developed (scenic and habitat values, for example), the primary use of the land is agricultural. Easements funded by the CFCP must be of a size and nature suitable for viable commercial agriculture.

Sustainable Agricultural Lands Conservation Program

The Sustainable Agricultural Lands Conservation Program (SALCP) is a component of the Affordable Housing and Sustainable Communities Program (AHSC), developed and implemented under the Greenhouse Gas Reduction Fund within the California Budget Act of 2014. The goal of the AHSC is to "reduce greenhouse gas emissions through projects that implement land use, housing, transportation, and agricultural land preservation practices to support infill and compact development…" It defines eligible projects to include "the acquisition of easements or other approaches or tools that protect agricultural lands that are under pressure of being converted to nonagricultural uses, particularly those adjacent to areas most at risk of urban or suburban sprawl."

The most recent guidelines for the SALCP grant program, approved by the Strategic Growth Council in 2025, included provisions for funding for agricultural conservation capacity and project development, agricultural conservation acquisition, and agricultural conservation planning (California Strategic Growth Council 2023).

Delta Reform Act

The Delta Protection Plan, which was enacted by the Delta Stewardship Council, identifies agriculture as the principal land use in the Delta, but indicates that in recent decades the total area of agricultural lands has declined, as has the overall percentage of lands in agricultural use. The Delta Protection Plan states that the continued viability of agriculture in the Delta will require the protection of sufficient farmland and fresh water to support commercially viable operations and provide ways for agriculture to co-exist with habitat restoration. Policies of the Plan acknowledge the importance of protecting these lands, with strategies for responding to changing conditions and new challenges. The 2025 Blueprint's consistency with the Delta Protection plan is evaluated in Section 3.10, "Land Use and Planning."

LOCAL

General Plans

The most comprehensive land use planning for the SACOG region is provided by city and county general plans, which local governments are required by state law to prepare as a guide for future development. In general, local planning policies related to agriculture and forestry resources are established to conserve and preserve agricultural land; protect natural resources; enhance Delta agriculture; and support, sustain, reinvent, and diversify the agricultural economy. In addition to these general policies, jurisdictions may have more specific policies regarding agricultural lands in the Farmland Mapping and Monitoring Program, Williamson Act lands, local preference, and/or agribusiness.

Within the six counties comprising the plan area, most agriculture and forestry resources are located within unincorporated county areas. Policies related to agriculture and forestry are established in the following elements of general plans within the region: Agriculture and Forestry (El Dorado County), Agricultural and Forestry Resources (Placer County), Agricultural (Sacramento County), Agricultural Resources (Sutter County), Agriculture and Economic Development (Yolo County), and Farmland and Forests Section of the Natural Resources Element (Yuba County).

Zoning

The city or county zoning code or ordinance is the set of detailed requirements that implement the general plan policies at the level of the individual parcel. The zoning code establishes separate districts or zones (e.g., residential, commercial, industrial, public, open space), presents standards for development in different districts, and identifies which uses are allowed in the various zoning districts to ensure neighboring land uses are compatible with one another. State law requires the city or county zoning code to be consistent with the jurisdiction's general plan.

The zoning code can establish specific districts for agriculture and/or forestry resources to protect farmland and farming activities from incompatible nonfarm uses and vice versa. Agricultural zoning can specify many factors, such as the farm uses allowed, minimum farm size, the number of nonfarm dwellings allowed, or the size of a buffer separating farm and nonfarm properties. All six counties in the plan area have agricultural zoning districts, including:

- **El Dorado County**: Limited Agricultural, Planned Agricultural (e.g., 20/30/40-acre), Agricultural Grazing, Timber Production, Forest Resource, Rural Lands;
- **Placer County**: Agricultural Exclusive, Farm, Forestry, and Timberland Production;
- **Sacramento County**: Permanent Agriculture (e.g., 20/40/80/160-acre) and Interim Agricultural (e.g., 10/20/40-acre);
- **Sutter County**: Agricultural Education and Entertainment, Agricultural Homestays, Agricultural Manufacturing, Agricultural Processing, Agricultural Product Sales, Agricultural Supplies and Services, Agricultural Truck Yards, Agriculture, Animal Processing and Intensive Animal Operations;
- **Yolo County**: Agricultural Intensive, Agricultural Extensive, Clarksburg Agricultural District Overlay Zone; and
- **Yuba County**: Exclusive Agricultural.

Additionally, some counties include agricultural residential designations, with various minimum parcel requirements, as well as agricultural commercial or industrial processing zones.

Public Ownership, Purchase of Development Rights, and Open Space Acquisition

Local governments and special districts, either on their own or working with land trusts and conservancies, can acquire fee title to agricultural and open space lands or purchase development rights to preserve rural and agricultural areas, watersheds, or critical habitat, or to create public parks and recreational areas.

Oak Woodland Management Plans

As discussed above under State Regulations, SB 1334 of 2004, the Oak Woodlands Conservation Act, requires all counties in California to adopt oak woodland management plans and ordinances that require a discretionary permit for oak woodland conversions. It also requires all counties to set minimum mitigation standards. Five of the six counties within the plan area have adopted Oak Woodland Management Plans. Additionally, Sacramento County's General Plan addresses the protection of oak woodlands in the Conservation Element.

Lastly, local planning policies addressing biological resources are also established in each jurisdiction's general plan. These policies addressing biological resources also address the protection of forest lands. For more information on forest land as a natural resource and habitat, refer to Section 3.4, "Biological Resources."

3.2.2 Environmental Setting

The SACOG region has a long history of agricultural and forestry activity due to its location, encompassing part of the fertile Central Valley of California and the forested foothills of the Sierra Nevada Mountain Range. There are over 1.8 million harvested agricultural acres and 1.3 million acres of forest land in the region, together comprising more than 80 percent of the plan area. The region's Mediterranean climate, water availability, fertile soils, skilled producers, supportive infrastructure and other assets result in a rich diversity of high-quality crops and products. The fertile soils and variable soil types of the region allow for the cultivation of a diverse array of crops. Agricultural activities in the region include rice, crops, trees, and irrigated pasture. Crops grown in the region include rice, almonds, walnuts, plums, peaches, tomatoes, wheat, olives, corn, alfalfa, pears, sunflowers, grapes, kiwifruit, and hay. Farming is the

economic driver in the region. It is the basis of the economy for most of the counties and local communities (Northern California Water Association 2024).

The following paragraphs describe agricultural and forestry resources in each county in the plan area. The acreages for agricultural land include pasture and grazing lands and were confirmed through crop reports published by each county. These values represent active, tillable acres of agriculture and may encompass acres of agricultural land cover suitable as habitat for special-status species. (See Section 3.4, "Biological Resources," for a discussion of habitat conversion impacts.) Table 3.2-1 summarizes the existing agricultural and forest lands by county within the plan area.

Table 3.2-1 Acres of Agricultural and Forest Land in the Plan Area

County	Agricultural Land (acres)	Publicly Owned Forest Land	Forest Land Total
El Dorado	257,608	369,393	649,801
Placer	152,857	347,571	538,419
Sacramento	348,218	98	1,057
Sutter	331,906	377	2,285
Yolo	522,946	3,736	18,700
Yuba	216,919	43,379	107,619

Source: DOC 2020.

El Dorado County

In El Dorado County, lands on the west slope of the county are considered the most valuable for agriculture because of the area's gentler slopes and richer soils. Historically, grazing of cattle and other livestock was the primary economic contributor in El Dorado County. Recently, production of fruit (including wine grapes) and nuts has become a major contributor to the county's agricultural economy. Apple Hill Growers Association (55 ranches) is also a major agricultural contributor in the county (El Dorado and Alpine County Department of Agriculture 2024).

Forest lands in El Dorado County include Eldorado National Forest and other National Forest System land (USDA Forest Service 2024). A total of 118,364 million board feet (BF) of timber was harvested from private and public forests in El Dorado County 2023 (El Dorado and Alpine County Department of Agriculture 2024).

Placer County

Placer County's primary agricultural products are fruit and nut crops, timber, rice, and livestock. (County of Placer Department of Agriculture 2024).

The majority of Placer County's forested land is between Auburn and Lake Tahoe, including parts of two national forests (Placer County Air Pollution Control District 2011). A total of 44.5 million BF of timber was harvested from private and public forests in Placer County in 2023 (County of Placer Department of Agriculture 2024).

Sacramento County

Although it is the most urbanized county in the region, Sacramento County has a long history of agricultural activity. The majority of agricultural lands and activities are located in the south and east county areas, including the Sacramento River Delta region. The primary agricultural uses within the county include wine grapes, pears, dairies, nurseries, tomatoes, aquaculture, livestock, rice, and corn (County of Sacramento Department of Agriculture 2024).

Sutter County

Agriculture is the primary industry of Sutter County. The county's valley floor location between two major rivers has created, over geological time, a broad area of deep, rich agricultural soils with abundant surface and subsurface water. Together with an inland climate that provides for a long growing season, these factors have led to a productive agricultural environment. Major agricultural products include rice, tomatoes, cling peaches, dried prunes, and walnuts. (Sutter County Department of Agriculture 2024).

Yolo County

Yolo County's flat valley topography and rich agricultural soils have made agriculture the primary economic development driver of the county. Top commodities that yield high production value in the county are tomatoes, almonds, wine grapes, organic production, and rice (Yolo County Department of Agriculture 2024).

Yuba County

Agriculture remains a prominent land use in the county. Rice is the county's top crop, followed by kiwi, walnuts, and livestock (Yuba County Department of Agriculture 2024).

Forest land is primarily in the northeastern portion of the county. 5.1 million BF of timber was produced in Yuba County in 2023(Yuba County Department of Agriculture 2024).

FARMLAND MAPPING AND MONITORING PROGRAM LANDS

FMMP farmland categories are based on local soil characteristics and irrigation status. Farmlands are classified according to soil factors, including available water holding capacity, temperature regime, acidity, depth to the water table, electrical conductivity, flooding potential, erosion hazard, permeability, rock content, and rooting depth. FMMP's land classification system is outlined in the section below. The best quality land is identified as Prime Farmland and Farmland of Statewide Importance.

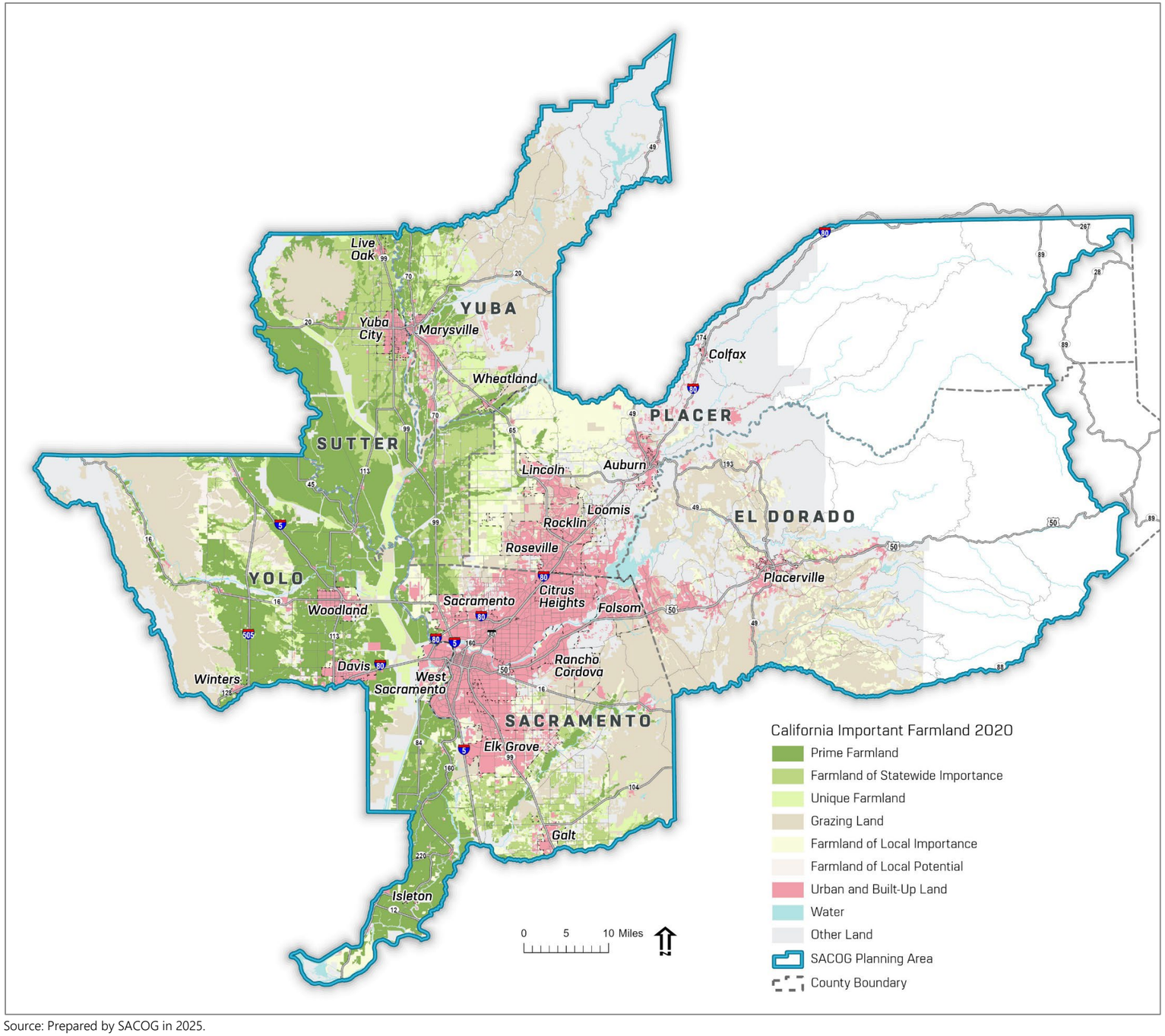
FMMP data are typically updated every 2 years and use a minimum mapping unit of 10 acres. Figure 3.2-1 depicts areas devoted to Prime Farmland, Unique Farmland, Farmland of Statewide Importance, and Farmland of Local Importance. Most of the land located west of the Sierra Nevada foothills and east of the Capay Valley is classified as "Important Farmland" (i.e., either Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance). Western Yolo County, the eastern third of Sacramento County, the Sutter Buttes region in Sutter County, and the foothill regions of El Dorado, Placer, and Yuba counties are predominantly classified as grazing land.

An acreage summary by FMMP mapping category for the plan area is presented in Table 3.2-2. The table shows that Important Farmland is concentrated in the counties of Sacramento, Sutter, and Yolo due to the fertile soils and flat topography of these valley counties. Although El Dorado, Placer, and Yuba counties contain less Important Farmland, these counties contain significant grazing and "Other" land. Almost 62 percent of the region is classified as farmland and only 11 percent is currently urbanized. Development pressures affect agricultural lands throughout the region due to high population and employment growth. Agriculture conversion pressure is greatest at the edge of existing urban development.

Table 3.2-2 FMMP Farmlands Summary by County for the Plan Area

Farmland Category	El Dorado	Placer	Sacramento	Sutter	Yolo	Yuba	Region Total
Prime Farmland	529	7,297	84,684	159,083	243,748	38,968	**534,308**
Farmland of Statewide Importance	794	4,001	43,826	103,178	19,985	10,526	**182,311**
Unique Farmland	3,115	19,382	15,643	15,854	44,467	33,300	**131,761**
Farmland of Local Importance	58,215	89,213	56,276	0	49,086	0	**252,790**
Grazing Land	194,955	32,964	147,789	53,791	165,660	134,125	**729,284**
All Farmland	257,608	152,857	348,218	331,906	522,946	216,919	**1,830,454**
Urban and Built-up Land	32,285	63,080	185,537	13,840	31,732	12,907	**339,381**
Other Land	239,550	190,424	85,436	40,893	94,527	0	**650,830**
Water	6,968	5,011	16,896	2,671	4,246	7,890	**43,682**
Non-Farmland	278,803	258,515	287,869	57,404	130,504	20,796	**1,033,892**
Total Area Surveyed	**536,411**	**411,372**	**636,087**	**389,310**	**653,450**	**237,715**	**2,864,346**

Source: Farmland Mapping and Monitoring Program 2020; DOC DLRP.



Source: Prepared by SACOG in 2025.

Figure 3.2-1 Significant Agricultural Lands in the Plan Area

WILLIAMSON ACT CONTRACTS

In 1965, the State Legislature passed the California Land Conservation Act (better known as the Williamson Act) in response to agricultural property tax burdens resulting from rapid land value appreciation (see Section 3.2.1, "Regulatory Setting," for more detail). The DOC's Williamson Act data includes any lands that are currently enrolled under a California Land Conservation Act contract. This analysis does not include lands that are in a non-renewal status. Table 3.2-3 shows the number of agricultural lands under Williamson Act contract in each of the counties in the SACOG region.

Table 3.2-3 Williamson Act Lands within the Plan Area

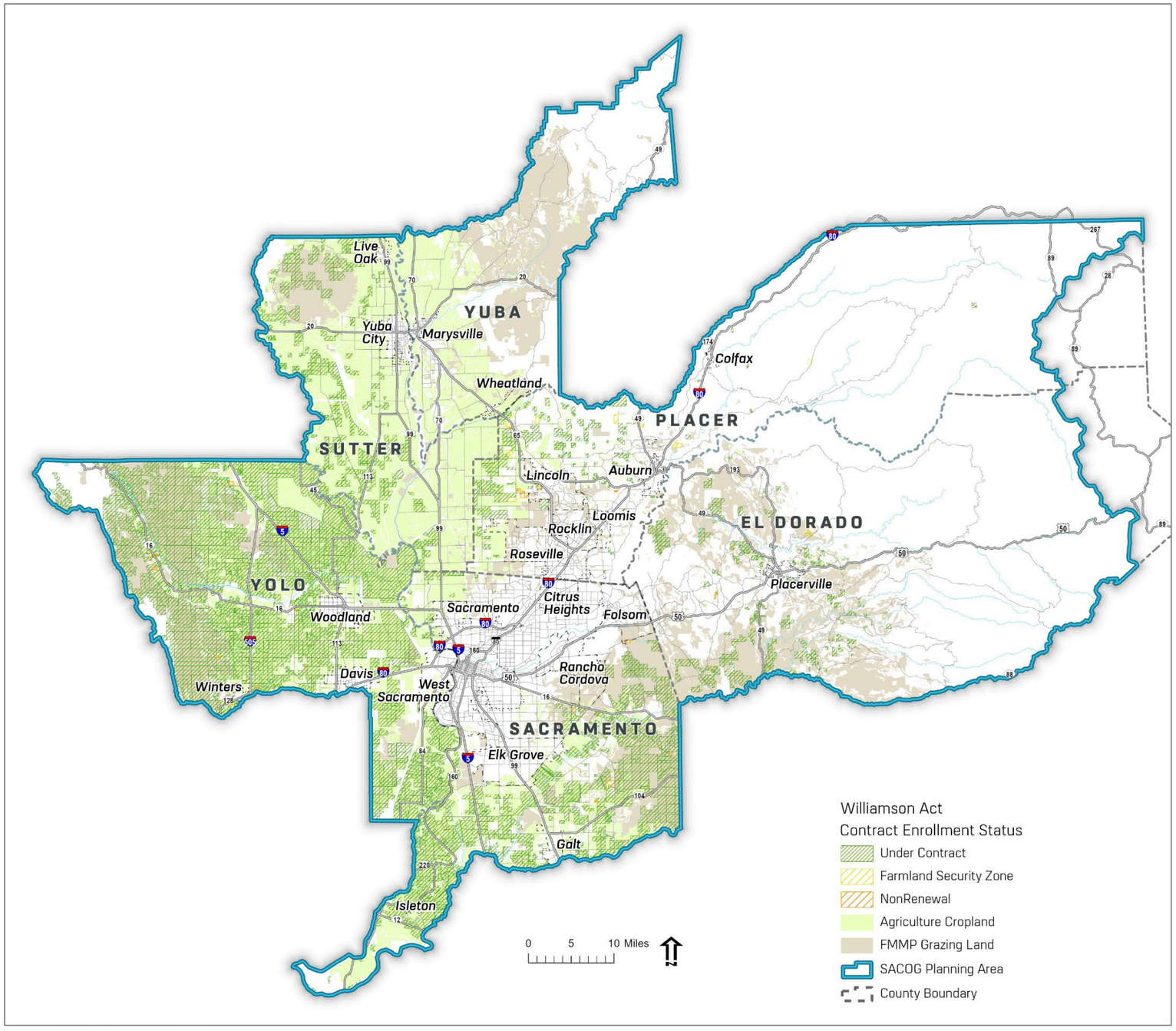
County	Prime Acres of Active Williamson Act Lands	Nonprime Acres of Active Williamson Act Lands	Total Acres of Active Williamson Act Lands	Percent of Total Land Acres in Williamson Act Contracts
El Dorado	230	32,706	32,936	3%
Placer	2,281	30,176	32,457	3%
Sacramento	49,951	117,073	167,024	26%
Sutter	33,845	30,379	64,224	17%
Yolo	182,351	244,616	426,967	65%
Yuba	—	—	—	—
SACOG Region	268,658	454,950	723,608	18%

Note: Yuba County does not participate in the Williamson Act program

Source: Farmland Mapping and Monitoring Program 2020.

The SACOG region contains a total of 723,608 acres of land contracted under the Williamson Act. Of those acres, 268,658 acres are Prime Farmland and 454,950 acres were nonprime. More than 50 percent of prime and nonprime lands under contract are in Yolo County. About 25 percent of all contract lands are in Sacramento County, with the remainder in El Dorado, Placer, and Sutter counties. Yuba County does not participate in the program. Figure 3.2-2 shows the location of Williamson Act lands in the SACOG region.

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Source: Prepared by SACOG in 2025.

Figure 3.2-2 Williamson Act Lands in the Plan Area

GENERAL PLAN DESIGNATIONS AND ZONING FOR AGRICULTURE AND FORESTRY

County general plan and zoning data from all six counties were used to analyze lands designated for agriculture and forest uses. Land use and zoning designations within incorporated cities is not summarized because cities generally do not have substantial areas designated as agriculture or forest land within the planning boundaries.

As of 2024, the SACOG region contained 1,623,986 acres of land zoned for agricultural uses, 1,522,371 acres of land designated for agriculture in local general plans, and 723,608 acres of farmland under active Williamson Act contracts. These categories are not mutually exclusive. That is, lands classified in one category can also be classified in one or both of the other categories. In Placer County, there are general plan and zoning land uses that are categorized as agriculture and/or timber/forest. These acres were accounted for in the forested land acres and not doubled counted in the agricultural acreage. Although there is agricultural land in Placer County, the majority of the land with the combined "agriculture/timber" designation is forested land.

Further, three of the six county general plans within the plan area establish designations that include forests or timberland for production, though each county does so through the use of a different approach. Only Placer County establishes generalized designations specifically for "Forestry" and "Timberland," which is further divided into separate designations by minimum parcel acreage (Placer County 2013).

El Dorado County includes forest land in the "Natural Resources" designation, which covers 636,651 acres of land within the county (El Dorado County 2024). Similarly, Yuba County includes agriculture and forest land in the "Natural Resources" designation, covering 288,366 acres of land within the county (Yuba County 2011). Sacramento, Sutter, and Yolo counties do not reference forests or timberland in their general plans.

At the time the NOP was issued in 2025, the SACOG region contained a total of 1,542,444 acres of land designated for forest or timber in the applicable county general plans and 1,146,324 acres of land zoned for forest land or timber production, including areas where the forest/timber designation cannot be separated from agricultural or natural resource designations.

CALIFORNIA LAND COVER MAPPING AND MONITORING PROGRAM

California's vegetation is mapped by the CAL FIRE's Land Cover Mapping and Monitoring Program. These data are produced using remote sensing and aerial imagery to create a dataset that includes tree size and tree canopy with a minimum map unit of 2.5 acres. Because remote sensing data is used to estimate all tree canopy, in some cases, particularly in more densely populated areas, it is likely these are not actual "forest" areas. The data used in this analysis were geographically screened so that only forests that exist today were used. These areas are within the Lands Not Identified for Development in El Dorado, Placer, and Yuba counties. Forest land cover data are also presented in Section 3.4, "Biological Resources," for purposes of understanding the impacts of the 2025 Blueprint on natural community types, habitat uses and values, and biological resources.

3.2.3 Environmental Analysis

METHODOLOGY

This program-level analysis generally evaluates the potential loss of agricultural and forestry resources from implementation of the 2025 Blueprint based on the regional growth pattern and planned transportation improvements relative to the known distribution of agricultural and forestry resources throughout the plan area.

The areas identified for growth and the planned transportation improvements anticipated in the 2025 Blueprint were overlaid with various farmland and forestry data. As described in the introductory text to Chapter 3, "Environmental Impacts and Mitigation Measures," a 100-foot buffer area around the center line of the proposed projects is assumed in the footprint of planned transportation improvements because the precise alignment, width, and location in

relation to agricultural and forestry resources, are not known at this time. The analysis overestimates potential impacts where these planned transportation improvements would not use the entire buffer area or consist of improvements that would be constructed within the footprint of existing roadways (e.g., re-paving; new transit service; bicycle lanes added within existing developed right-of-way). A majority of new Class I trails in the plan area run parallel to new, expanded, or existing roadways or along waterways and levees, and were therefore assumed to be captured by the 100-foot buffer assumed for planned transportation improvements.

The following data sources were used to analyze the agriculture and forestry environment: the FMMP, the DOC's Williamson Act, general plans, zoning codes, and CAL FIRE's Land Cover Mapping and Monitoring Program. In addition, the acreages for agricultural land in county crop reports. Using this combination of data sources in addition to individual county review is more accurate than solely relying on FMMP data, which does not capture information about farms that are less than 10 acres in size or that have been put into production during the last 20 years. The method used for this analysis captures all designated farmland in the region.

For the purposes of this analysis Prime Farmland, Unique Farmland, and Farmland of Statewide Importance were considered. Analysis of conversion of Farmland of Local Importance is not required under CEQA and, therefore, is excluded from the analysis. Williamson Act data includes any lands currently enrolled under a California Land Conservation Act contract in 2023 (with the exception of 2013 data used for Yolo County, which are described above). This analysis does not include lands that are in a non-renewal status. In addition, county general plan and zoning data were used to analyze lands designated for agriculture and forest uses and measure impacts on agriculture and forest zoned uses.

Land cover data from the Land Cover Mapping and Monitoring Program were used to analyze forest lands.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, the project would have a significant adverse effect related to agricultural and forestry resources if it would:

- convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- conflict with existing zoning or General Plan land use designations for agricultural use, or with a Williamson Act contract;
- conflict with existing zoning for, or land use designation for, or cause rezoning of, forest land (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 forest land or conversion of forest land to non-forest use; and/or
- involve other changes in the existing environment, which, due to their location or nature, could result in conversion of farmland to non-agricultural use.

ISSUES NOT DISCUSSED FURTHER

All of the topics identified in the significance criteria above are addressed in the following analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to Non-Agricultural Use

Regional Growth and Land Use Change

As of 2024, the SACOG region contained 534,308 acres of Prime Farmland, 131,761 acres of Unique Farmland, and 182,311 acres of Farmland of Statewide Importance, as shown on the maps prepared pursuant to the FMMP (see Table 3.2-2 and Figure 3.2-1). The potential overlap of the 2025 Blueprint projected land use pattern and planned transportation improvements with FMMP-designated farmland is shown below in Table 3.2-4.

The projected land use pattern of the 2025 Blueprint has the potential to impact 849 acres of Prime Farmland, 263 acres of Unique Farmland, and 994 acres of Farmland of Statewide Importance for a total potential impact of approximately 2,106 acres.

Table 3.2-4 2025 Blueprint Farmland Impact by Community Type

Community Type	Prime Farmland Acres of Impact	Unique Farmland Acres of Impact	Farmland of Statewide Importance Acres of Impact	Total Acres of Impact
Projected Land Use Pattern				
Center and Corridors	-	28	14	42
Established Communities	462	24	231	717
Developing Communities	361	208	719	1,288
Rural Residential Communities	26	3	30	59
Not Identified for Development	—	—	—	—
Transportation Projects				
Center and Corridors	—	—	—	—
Established Communities	9	—	44	53
Developing Communities	28	18	122	168
Rural Residential Communities	—	—	9	9
Not Identified for Development	122	134	160	416
Regional Totals				
Projected Land Use Pattern Total	**849**	**263**	**994**	**2,106**
Transportation Projects Total	**159**	**152**	**335**	**646**
Land Use and Transportation Combined Total	**1,008**	**415**	**1,329**	**2,752**

Note: FMMP = Farmland Mapping and Monitoring Program.

Source: Farmland Mapping and Monitoring Program 2020; DOC DLRP, SACOG, Projected land use and 100-foot buffers around transportation projects land use forecast and planned transportation project data and analysis, SACOG June 2024.

Locally, within the more densely populated areas that are Center and Corridor Communities or Established Communities in the region, the projected land use pattern of the 2025 Blueprint has the potential to impact 462 acres of Prime Farmland, 52 acres of Unique Farmland, and 245 acres of Farmland of Statewide Importance for a total potential impact of approximately 759 acres. The largest areas are within the city limits of Woodland, wheatland, and Yuba City. As explained above, farmland is mapped based on local soil characteristics and irrigation status in the FFMP and may not reflect the most current land use or planning at the parcel level. Within the rural areas that are developing, rural, or not identified for development, the projected land use pattern of the 2025 Blueprint has the potential to impact 387 acres of Prime Farmland, 211 acres of Unique Farmland, and 749 acres of Farmland of Statewide Importance for a total potential impact of approximately 1,347 acres.

Transportation Network Improvements and Programs

Planned transportation improvements would occur on 159 acres of Prime Farmland, 152 acres of Unique Farmland, and 335 acres of Farmland of Statewide Importance, for a total impact of approximately 646 acres.

Locally, within the more densely populated areas that are Centers and Corridors or Established Communities in the region, the projected transportation network improvements and programs of the 2025 Blueprint have the potential to impact 9 acres of Prime Farmland and 44 acres of Farmland of Statewide Importance for a total potential impact of approximately 53 acres. Transportation network improvements would not impact any Unique Farmland in urbanized areas. Within the rural areas that are developing, rural, or not identified for development, the projected land use pattern of the 2025 Blueprint has the potential to impact 150 acres of Prime Farmland, 152 acres of Unique Farmland, and 291 acres of Farmland of Statewide Importance for a total potential impact of approximately 593 acres.

Summary

Together, the projected land use pattern and planned transportation improvements have the potential to impact 1,008 acres of Prime Farmland, 415 acres of Unique Farmland, and 1,329 acres of Farmland of Statewide Importance for a combined potential impact to 2,752 acres of FMMP-designated farmland. The 2,752 acres of FMMP-designated farmland that may be impacted represents approximately 4.8 percent of the total 56,810 acres of new development anticipated under the 2025 Blueprint and approximately 0.3 percent of all existing FMMP-designated farmland in the region. The impact of the 2025 Blueprint to farmland conversion would be **potentially significant**.

Mitigation Measures

SACOG does not have the authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measure or other comparable measures identified by the lead agency at a project-level would reduce the impacts to FMMP farmland, and agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081).

Mitigation Measure 3.2-1: Provide for Permanent Protection of Farmland

The implementing agency shall mitigate loss of such farmland by adopting measures that may include but are not limited to the following:

- Provide permanent protection of in-kind farmland at a minimum 1:1 ratio of comparable quality land, in the form of easements, fees, or elimination of development rights/potential.
- Locate the easement within the same city or community or city in which the conversion occurs; if easements within the same community or city are not available or otherwise feasible to obtain, the easement shall be in as close proximity as possible to the same city or community in which the conversion occurs.

Significance after Mitigation

If the implementing agency adopts this mitigation measure, impacts associated with the conversion of Prime, Unique, or Farmland of Statewide Importance would be reduced as projects converting such farmland would be required to protect land of comparable quality in the same community as the farmlands being converted. Therefore, Impact 3.2-1 may be reduced, but not to a less-than-significant level, because net loss of agricultural land would still occur. Additionally, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, Impact 3.2-1 would be **significant and unavoidable** for purposes of this program-level review.

Impact 3.2-2: Conflict with Existing Zoning or General Plan Land Use Designations for Agricultural Use, or with a Williamson Act Contract

Regional Growth and Land Use Change

The potential overlap of the 2025 Blueprint projected land use pattern and planned transportation improvements with existing agricultural use zoning or general plan land use designation or with lands subject to a Williamson Act Contract is shown in Table 3.2-5 below.

Table 3.2-5 2025 Blueprint Agricultural Zoning, Agricultural General Plan Designations, and Williamson Act Lands Impacts by Community Type

Community Type	Agricultural Zoning Acres of Impact	Agricultural General Plan Designations Acres of Impact	Williamson Act Lands Acres of Impact
Projected Land Use Pattern			
Center and Corridor Communities	48	—	—
Established Communities	447	114	—
Developing Communities	1,718	35	43
Rural Residential Communities	633	55	2
Lands Not Identified for Development in the 2025 Blueprint Planning Period	—	—	—
Transportation Projects			
Center and Corridor Communities	3	1	—
Established Communities	141	5	—
Developing Communities	245	5	29
Rural Residential Communities	26	16	—
Lands Not Identified for Development in the 2025 Blueprint Planning Period	169	531	136
Regional Totals			
Projected Land Use Pattern Total	**2,846**	**204**	**45**
Transportation Projects Total	**584**	**558**	**165**
Land Use and Transportation Combined Total	**3,430**	**762**	**210**

Note: Zoned agricultural lands, agricultural lands designated in general plans, and Williamson Act lands cannot be "totaled," as some lands may fit in more than one category. Therefore, totaling the three categories would overestimate the actual amount of agricultural land.

Note: Numbers may not total due to rounding.

Source: SACOG Jurisdictions General Land Use Plans 2020; Williamson Act 2022; Land use forecast and planned transportation project data and analysis, SACOG June 2024. Zoning from jurisdictions compiled by SACOG in 2025.

By focusing on providing small-lot and attached housing, maximizing infill and redevelopment opportunities, and planning for communities with a mix of uses, the compact land use pattern would have an overall footprint that minimizes growth in agricultural areas. The projected land use pattern of the 2025 Blueprint has the potential to develop 2,846 acres zoned for agriculture, 204 acres designated for agriculture, and 45 acres of farmland under active Williamson Act contracts.

While some of the region's undeveloped rural lands are identified in local plans for development at some point in the future, most are not. Because the regional growth pattern of the 2025 Blueprint would result in the conversion of lands designated for agriculture in existing zoning and general plans, as well as lands under active Williamson Act Contracts, to non-agricultural uses there is a potential for the 2025 Blueprint to conflict with these land use protections.

Transportation Network Improvements and Programs

Planned transportation improvements were analyzed by measuring the area overlapping agricultural zoning, agricultural general plan designations, and farmland under active Williamson Act contracts. This analysis indicated that 584 acres of land zoned for agriculture, 558 acres of land designated for agriculture, and 165 acres of farmland under active Williamson Act contracts could potentially be converted to non-agricultural use by 2025 Blueprint planned transportation improvements. Because the transportation projects would result in the conversion of lands designated for agriculture in existing zoning and general plans, as well as lands under active Williamson Act Contracts, there is a potential for transportation infrastructure under the 2025 Blueprint to conflict with these land use protections.

Summary

Together, the projected land use pattern and planned transportation improvements have the potential to convert 762 acres of land designated for agriculture and Williamson Act contracted lands. Because the non-agricultural uses and infrastructure may result in conflicts with these plans and contracts, the impact of the 2025 Blueprint would be **potentially significant**.

Mitigation Measures

No feasible mitigation measures exist to reduce the impact.

Significance after Mitigation

The regional development pattern could result in the conversion of land zoned or designated for agriculture, which would conflict with these existing designations. Mitigation would not eliminate the potential for conflict with protective land use designations to occur. Additionally, SACOG cannot require the implementing agency to adopt these mitigation measures, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, Impact 3.2-2 would be **significant and unavoidable** for purposes of this program-level review. At the project level, implementing agencies may require the evaluation of alternative development locations that avoid agricultural land conversion. Implementing agencies may also approve plan amendments and rezones to bring any conflicting development or transportation infrastructure into compliance with plans and zoning, such that no significant impact would occur.

Impact 3.2-3: Conflict with Existing Zoning or Land Use Designation for, or Cause Rezoning of, Forest Land, Timberland, or Timberland Zoned Timberland Production

Regional Growth and Land Use Change

By focusing on providing small-lot and attached housing, maximizing infill and redevelopment opportunities, and planning for communities with a mix of uses, the 2025 Blueprint would create a compact land use pattern that would minimize impacts on forest land and timberland. The regional growth pattern of the 2025 Blueprint does not overlap with any land designated by an existing general plan for forest land or timberland.

Table 3.2-6 2025 Blueprint Timberland/Forest Zoning and General Plan Designations Impacts by Community Type

Community Type	Forest Land, Timberland, or Timberland Production Zoning Designation Acres of Impact	Forest Land, Timberland, or Timberland Production General Plan Designation Acres of Impact
Projected Land Use Pattern		
Center and Corridor Communities	—	—
Established Communities	—	—
Developing Communities	—	—
Rural Residential Communities	—	—
Lands Not Identified for Development in the 2025 Blueprint Planning Period	—	—

Community Type	Forest Land, Timberland, or Timberland Production Zoning Designation Acres of Impact	Forest Land, Timberland, or Timberland Production General Plan Designation Acres of Impact
Transportation Projects		
Center and Corridor Communities	—	—
Established Communities	—	—
Developing Communities	—	—
Rural Residential Communities	—	6
Lands Not Identified for Development in the 2025 Blueprint Planning Period	—	217
Regional Totals		
Projected Land Use Pattern Total	—	—
Transportation Projects Total	—	**223**
Land Use and Transportation Combined Total	—	**223**

Note: Sacramento, Sutter, and Yolo counties do not have forest or timberland general plan designations. Numbers may not total due to rounding.

Source: SACOG Jurisdictions General Land Use Plans 2020; Williamson Act 2022; Land use forecast and planned transportation project data and analysis, SACOG June 2024. Zoning From Jurisdictions compiled by SACOG in 2025.

Transportation Network Improvements and Programs

Planned transportation improvements were analyzed by measuring areas overlapping forest land, timberland, and timberland production zoning and general plan designations. The planned transportation improvements of the 2025 Blueprint would potentially affect 223 acres of land designated for forest land, timberland, or timberland production in a local land use plan but would not any areas zoned for these uses. The planned transportation improvements of the 2025 Blueprint would potentially conflict with or cause general plan amendments for 6 acres of land designated as forest land or timberland. In rural residential communities and 217 acres in lands not identified for development in the 2025 Blueprint planning period.

Summary

Together, the projected land use pattern and planned transportation improvements have the potential to impact land r designated as forest land, timberland, or timberland production. As analyzed above, the potential for the 2025 Blueprint to conflict with existing zoning or land use designations or cause rezoning of forest land, timberland, or timberland production would be **potentially significant**.

Mitigation Measures

No feasible mitigation measures exist to reduce the impact.

Significance after Mitigation

The conversion of land that is zoned or designated forest land or timberland cannot be feasibly mitigated. As no feasible mitigation exists, Impact 3.2-3 would be **significant and unavoidable** for purposes of this program-level review. However, individual agencies may require the evaluation of alternative development locations that avoid forest land conversion or approve plan amendments and rezones to bring any conflicting development or transportation infrastructure into compliance with plans and zoning, such that no significant impact would occur.

Impact 3.2-4: Result in the Loss of Forest Land or Conversion of Forest Land to Non-Forest Use

Regional Growth and Land Use Change

The California Forest Legacy Act of 2007 defines "forest land" as "land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest

resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." For purposes of analysis, it is assumed that lands mapped as conifer forest, hardwood, or mixed forest by the California Land Cover Mapping and Monitoring Program fall under the definition of "forest land." The overlap between the regional growth areas anticipated in the 2025 Blueprint with the region's forest land is shown in Table 3.2-6.

Table 3.2-7 2025 Blueprint State-Designated Forest Land Impacts by Community Type

Community Type	Conifer Forest Acres of Impact	Hardwood Forest Acres of Impact	Total Acres of Impact
Projected Land Use Pattern			
Center and Corridor Communities	n/a	n/a	n/a
Established Communities	n/a	n/a	n/a
Developing Communities	—	1,126	1,126
Rural Residential Communities	557	960	1,517
Lands Not Identified for Development in the 2025 Blueprint Planning Period	—	—	—
Transportation Projects			
Center and Corridor Communities	n/a	n/a	n/a
Established Communities	n/a	n/a	n/a
Developing Communities	—	18	18
Rural Residential Communities	—	—	—
Lands Not Identified for Development in the 2025 Blueprint Planning Period	27	28	55
Regional Totals			
Projected Land Use Pattern Total	**557**	**2,086**	**2,643**
Transportation Projects Total	**27**	**46**	**73**
Land Use and Transportation Combined Total	**584**	**2,132**	**2,716**

Note: (n/a): Because the Land Cover Mapping and Monitoring data are remote sensing data created to estimate all tree canopy, in some cases, particularly in urban areas, it is likely these are not actual "forest" areas. No screening for tree canopy density was done in this analysis; however, the data were geographically screened so that only forests that actually exist today were used. Therefore, tree canopy in Center and Corridor and Established Communities were not analyzed as forested areas.

Source: California Wildlife Habitat Relationships fveg22_1 CAL FIRE-FRAP; Land use forecast and planned transportation project data and analysis, SACOG June 2024.

By focusing on providing small-lot and attached housing, maximizing infill and redevelopment opportunities, and planning for communities with a mix of uses, the 2025 Blueprint creates a compact land use pattern, which would minimize impacts to forest land. The regional growth pattern of the 2025 Blueprint has the potential to impact 557 acres of conifer forest and 2,086 acres of hardwood forest, for a total impact of 2,643 acres of forest land. The projected land use pattern of the 2025 Blueprint does not have the potential to impact any forests within urbanized areas.

Transportation Network Improvements and Programs

Planned transportation improvements implemented as part of the 2025 Blueprint have the potential to impact 27 acres of conifer forest and 46 acres of hardwood forest for a total potential impact of 73 acres (see Table 3.2-7). Impacts would be similar to those described above for regional growth consistent with the projected land use pattern. Due to the importance of the region's forestry resources, the impact on forest land could be significant.

Summary

Together, the projected land use pattern and planned transportation improvements have the potential to impact 584 acres of conifer forest and 2,132 acres of hardwood forest for a total of 2,716 acres. As a total of all state-designated

forest land within the region, forest land that has the potential to be impacted by the projected land use pattern and planned transportation improvements associated with implementation of the 2025 Blueprint includes approximately 0.2 percent of total forest area in the plan area. While these impacts appear relatively small from a regional perspective, due to the importance of the region's forestry resources, these impacts are considered **potentially significant**.

Mitigation Measures

SACOG does not have the authority to require implementing agencies to adopt identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following measure or other comparable measures identified by the lead agency at a project level would reduce impacts to forest land, and agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081).

Mitigation Measure 3.2-2: Provide for Permanent Protection of Forest Land and Timberland

The implementing agency shall mitigate for loss of forest land or timberland by providing permanent protection of in-kind forest land or timberland at a minimum 1:1 ratio of comparable quality land, in the form of easements, fees, or elimination of development rights/potential. If feasible, the easement should be located within or in proximity to the land that is converted.

Significance after Mitigation

If the implementing agency adopts this mitigation measure, Impact 3.2-4 would help preserve existing forest and timberland in the region from conversion; however, it would not reduce the significant impact associated with conversion of these resources. Additionally, because SACOG cannot require the implementing agency to adopt this mitigation measure, it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, due to the importance of the region's forestry resources, these impacts on forest land remain **significant and unavoidable** for purposes of this program-level review.

Impact 3.2-5: Involve Other Changes in the Existing Environment that could Result in Conversion of Farmland to Non-Agricultural

Regional Growth and Land Use Change

Since the launch of the Rural-Urban Connections Strategy over a decade ago, multiple predecessor plans to the 2025 Blueprint have elevated the role of working lands such as agricultural and forestry, including quantifying the impact of the regional food system as well as employing strategies to protect valuable farmland and other open space. The plan lays out strategies to sustainably manage agriculture and natural resources to help foster a safe and resilient environment for all residents.

Less than 1 percent of the region's nearly two million acres of agricultural land is impacted by the land use forecast. This rural land base is vital to the region's agricultural economy, health, and quality of life. The land not only contributes directly to the region's economy — agriculture is one of the region's key tradable industries — it also enhances water supply and flood protection, recreation and tourism, habitat conservation, and provides aggregate and timber for development. By encouraging compact development, the 2025 Blueprint directs more growth to Center and Corridor Communities and Established Communities and deprioritizes conversion of undeveloped land. Keeping growth focused in areas that are already developed limits the amount of growth that takes place in undeveloped areas that could be agricultural lands.

However, as discussed in Impacts 3.2-1 and 3.2-2, implementation of the 2025 Blueprint would result in the conversion of 2,752 acres of Important Farmland, 3,430 acres of zoned agricultural land, 762 acres of general plan designated agricultural land, and 210 acres of land under Williamson Act contracts. Further, agricultural lands located near areas experiencing development-related conversion may face increased development pressure, either due to rising land values and/or conflicts and nuisances that result as developed uses encroach upon active agricultural operations. While the Right to Farm Act protects commercial agricultural operations that have been in business for more than 3 years from nuisance complaints or other regulations that hinder farming practices, the conversion of

land near agricultural uses may cause increased pressure for farmers in the plan area to convert farmland into urban uses. Additionally, as property values rise near farmlands due to the nearby conversion to developed land uses, farmers may feel economic pressure to develop their land. Locally, communities that are still developing may experience the rezoning of agricultural lands to residential and/or commercial uses.

Transportation Network Improvements and Programs

While much of the planned transportation improvements in the 2025 Blueprint would serve development, it is likely that implementation of planned transportation improvements along the edge of developed areas could increase access to agricultural and forest lands in a manner that could increase indirect development pressure and facilitate the conversion of these lands to urban uses.

Summary

The 2025 Blueprint is designed to improve transportation options and increase development within Center and Corridor Communities and Established Communities, limiting the rural-urban interface and associated development pressures. Nonetheless, because the 2025 Blueprint would result in conversion of farmland to non-agricultural use, the plan could indirectly result in the conversion of farmland to non-agricultural use related to the edge effects at the rural-urban interface. This impact would be **potentially significant**.

Mitigation Measures

SACOG does not have the authority to require implementing agencies to adopt identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following measures or other comparable measures identified by the lead agency at a project-level would reduce the potential conversion of agricultural land to non-agricultural uses, and agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081).

Mitigation Measure 3.2-3: Minimize Indirect Conversion of Farmland to Non-Agricultural Use

Implementing agencies shall require project proponents to:

- Design proposed projects to minimize, to the greatest extent feasible, the loss of the highest valued farmland.
- Redesign project features to minimize fragmenting or isolating farmland. Where a project involves acquiring land or easements, ensure that the remaining farmland is of a size sufficient to allow economically viable farming operations. This would avoid the fragmentation or isolation of farmland in a way that would not allow for economically viable farming operations which could increase the risk of it being indirectly converted to non-agricultural uses. The project proponents shall be responsible for acquiring easements, making lot line adjustments, and merging affected land parcels into units suitable for continued commercial agricultural management.
- Reconnect utilities or infrastructure that serve agricultural uses if these are disturbed by project construction. If a project temporarily or permanently cuts off roadway access or removes utility lines, irrigation features, or other infrastructure, the project proponents shall be responsible for restoring access as necessary to ensure that economically viable farming operations are not interrupted.
- Manage project operations to minimize the introduction of invasive species or weeds that may affect agricultural production on adjacent agricultural land. Where a project has the potential to introduce sensitive species or habitats or have other spill-over effects on nearby agricultural lands, the project proponents shall be responsible for acquiring easements on nearby agricultural land and/or financially compensating for indirect effects on nearby agricultural land. Easements (e.g., flowage easements) shall be required for temporary or intermittent interruption in farming activities (e.g., because of seasonal flooding or groundwater seepage). Acquisition or compensation would be required for permanent or significant loss of economically viable operations.
- Align corridors, incorporate buffer zones and setbacks, and integrate berms and fencing to avoid agricultural lands and to reduce conflicts with agricultural lands.

- Minimize severance and fragmentation of agricultural land by constructing underpasses and overpasses at reasonable intervals to provide property access.
- Provide buffers, berms, setbacks, fencing, or other project design measures to protect surrounding agriculture, and to reduce conflict with farming that could result from implementation of transportation improvements and/or projected land use pattern included as a part of the 2025 Blueprint.
- Implement other feasible conservation tools, such as those recommended by the California Department of Conservation Division of Land Resource Protection.
- Require project applicants to agree to provide real estate disclosures explaining farmers' rights to purchasers or lessees as a condition of project approval for projects located in active farming areas.
- Incorporate the use of agricultural buffers, as appropriate, to reduce land use conflicts with farming operations.

Mitigation Measure 3.2-4: Manage Growth at the Rural-Urban Interface to Support the Long-Term Viability of Agriculture

The implementing agency shall avoid or minimize pressure to convert agriculture land at the urban edge to non-agricultural uses by adopting regulations that enforce the innovations and best practices identified to minimize conversion pressures on farmland. Examples include but are not limited to:

- **Agriculture Buffers:** Buffers, generally imposed on new development, can assist in reducing urban land use conflicts with farming operations. Invest in urban edge agricultural operations that reinforce the effectiveness and permanence of buffers, create education and training opportunities, and generate a revenue stream that supports buffer acquisition and maintenance.
- **Right-to-Farm Ordinances:** These ordinances require project applicants to agree to provide real estate disclosures explaining farmers' rights to purchasers or lessees as a condition of project approval for projects located in active farming areas. The intent of such an ordinance is to protect farmers from nuisance complaints and enforcement actions.
- **Infill and Redevelopment Policies:** These policies, which are supportive of infill and redevelopment and consistent with the policy objectives of the 2025 Blueprint and SB 375, would direct population growth to urban communities, or in established rural communities, thereby reducing pressure to convert agricultural land to development.

Significance after Mitigation

If the implementing agency adopts Mitigation Measures 3.2-3 and 3.2-4, impacts to agricultural lands would be reduced as they would require that projects be designed to minimize the indirect conversion of farmland to non-agricultural use and would require local jurisdictions to implement growth management strategies to minimize the pressure to convert agriculture lands. With the implementation of these measures, Impact 3.2-5 may be reduced, but not necessarily to a less-than-significant level, because development pressure at the urban interface would still occur. Additionally, SACOG cannot require implementing agencies to adopt this mitigation measure, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. Therefore, due to the importance of the region's agricultural resources, these impacts on farmland would be **significant and unavoidable**.

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3.3 AIR QUALITY

This section evaluates the regional air quality impacts of implementing the 2025 Blueprint. The analysis of criteria pollutants focuses on the following: (1) ground-level photochemical smog (ozone) precursor emissions, for which portions of the plan area are currently designated as nonattainment under the national and State standards; (2) respirable particulate matter (PM_{10}) emissions, for which portions of the plan area are currently designated as - maintenance area under the federal standards; and (3) fine particulate matter ($PM_{2.5}$), for which portions of the plan area are currently designated as nonattainment under the federal standards. It also evaluates criteria pollutants and toxic air contaminants (TACs) from construction activity and local and regional emissions of TACs. This Draft EIR examines these pollutants at a regional level. However, for TACs, a localized analysis is provided to identify potential public health impacts from locating new and existing sensitive receptors near high volume roadways and stationary sources.

The related issues of greenhouse gas (GHG) emissions and potential climate change effects are addressed separately in Section 3.7, "Greenhouse Gas Emissions and Energy," of this Draft EIR.

Comments received in response to the notice of preparation (NOP) recommended the use of the Sacramento Metropolitan Air Quality Management District's *Guide to Air Quality Assessment in Sacramento County* in the analysis of air quality impacts related to construction and operation of the 2025 Blueprint. Comments also expressed concerns about $PM_{2.5}$ and cancer risk resulting from TACs, reducing receptor's exposure to TACs through the planting of vegetation near high-volume roadways, and reducing air quality emissions from the transportation sector through strategies to reduce vehicle miles traveled (VMT). The comments received in response to the NOP have been carefully reviewed and considered by SACOG in the preparation of the impact analysis in this section. Appendix A includes all NOP comments received.

3.3.1 Regulatory Setting

The plan area is subject to air quality regulations developed and implemented at the federal, State, and regional levels. At the federal level, the US Environmental Protection Agency (EPA) is responsible for implementation of the federal Clean Air Act (CAA). Some portions of the CAA (e.g., certain mobile-source and other requirements) are implemented directly by EPA. Other portions of the CAA (e.g., stationary-source requirements) are implemented by State and local agencies.

Responsibility for attaining and maintaining air quality in California is divided between the California Air Resources Board (CARB) and regional air quality districts. Areas of control for the regional districts are set by CARB, which divides the state into air basins. Plans, policies, and regulations relevant to the 2025 Blueprint are discussed below.

FEDERAL

Federal Clean Air Act

The federal CAA, as amended, is the primary federal law that governs air quality nationwide. The CAA was first enacted in 1963 and has been amended numerous times in subsequent years (1967, 1970, 1977, and 1990). The CAA establishes the National Ambient Air Quality Standards (NAAQS) and specifies future dates for achieving compliance. The CAA also mandates that each state submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. The plans must include pollution control measures that demonstrate how the standards will be met.

The federal CAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, it may prepare a federal implementation plan that imposes additional control measures. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

The sections of the CAA that would most substantially affect the development of the 2025 Blueprint include Title I (Nonattainment Provisions) and Title II (Mobile-Source Provisions).

Title I provisions were established with the goal of attaining the NAAQS for criteria pollutants. Table 3.3-1 shows the NAAQS currently in effect for each criteria pollutant. The NAAQS were amended in July 1997 to include an 8-hour standard for ozone and adopt a standard for $PM_{2.5}$. The 8-hour ozone NAAQS was further amended in October 2015 and lowered to 0.070 parts per million; EPA further amended the $PM_{2.5}$ annual arithmetic mean to 9 micrograms per cubic meter (µg/m^3) in 2024.

Table 3.3-1 National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California (CAAQS)[a,b]	National (NAAQS)[c] Primary[b,d]	National (NAAQS)[c] Secondary[b,e]
Ozone	1-hour	0.09 ppm (180 µg/m^3)	–[e]	Same as primary standard
	8-hour	0.070 ppm (137 µg/m^3)	0.070 ppm (147 µg/m^3)	
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	Same as primary standard
	8-hour	9 ppm[f] (10 mg/m^3)	9 ppm (10 mg/m^3)	
Nitrogen dioxide (NO_2)	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	53 ppb (100 µg/m^3)	Same as primary standard
	1-hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	—
Sulfur dioxide (SO_2)	24-hour	0.04 ppm (105 µg/m^3)	—	—
	3-hour	—	—	0.5 ppm (1,300 µg/m^3)
	1-hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	—
Respirable particulate matter (PM_{10})	Annual arithmetic mean	20 µg/m^3	—	Same as primary standard
	24-hour	50 µg/m^3	150 µg/m^3	
Fine particulate matter ($PM_{2.5}$)	Annual arithmetic mean	12 µg/m^3	9.0 µg/m^3 [g]	15.0 µg/m^3
	24-hour	—	35 µg/m^3	Same as primary standard
Lead [f]	Calendar quarter	—	1.5 µg/m^3	Same as primary standard
	30-day	1.5 µg/m^3	—	—
	Rolling 3-month	—	0.15 µg/m^3	Same as primary standard
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m^3)	No national standards	
Sulfates	24-hour	25 µg/m^3		
Vinyl chloride [f]	24-hour	0.01 ppm (26 µg/m^3)		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km		

Notes: µg/m^3 = micrograms per cubic meter; CAAQS = California Ambient Air Quality Standards; km = kilometers; mg/m^3 = milligrams per cubic meter; NAAQS = National Ambient Air Quality Standards; ppb = parts per billion; ppm = parts per million.

[a] California standards for ozone, carbon monoxide, SO_2 (1- and 24-hour), NO_2, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[c] National standards (other than the standards for ozone and particulate matter and those based on annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. The PM_{10} 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. The $PM_{2.5}$ 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[d] National primary standards: The levels of air quality necessary, to protect public health with an adequate margin of safety.

[e] National secondary standards: The levels of air quality necessary to protect public welfare from any known or anticipated adverse effects of a pollutant.

[f] The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. This was done to allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants, as this was the only means available at that time to regulate vinyl chloride and lead emissions. While vinyl chloride and lead have since been identified as toxic air contaminants under the Air Toxics Program, the CAAQS remains in force. Current regulatory efforts for vinyl chloride and lead are under CARB's Air Toxics Program

[g] On February 7, 2024, EPA promulgated a revised primary annual $PM_{2.5}$ NAAQS, strengthening the standard from 12.0 micrograms per cubic meter (µg/m^3) to 9.0 µg/m^3. As of May 2025, EPA has not made final designation determinations for the 2024 $PM_{2.5}$ standard.

Source: CARB 2024a.

Corporate Average Fuel Economy Standards

The Corporate Average Fuel Economy Standards (CAFE) were first enacted in 1975 to improve the average fuel economy of cars and light duty trucks.

In 2024, CAFE standards were finalized for model years (MYs) 2027 through 2031. The final rule establishes standards that require an industry-wide fleet average of approximately 49 miles per gallon (mpg) for passenger cars and light trucks. The final rule establishes standards that would require an industry-wide fleet average of approximately 50.4 mpg in MY 2031 for passenger cars and light trucks and an industry fleet-wide average for heavy-duty pickup trucks and vans (HDPUVs) of roughly 2.851 gallons per 100 miles in MY 2035. The final CAFE standards increase at a rate of 2 percent per year for passenger cars in MYs 2027–2031 and 2 percent per year for light trucks in model years 2029–2031. The final HDPUV fuel efficiency standards increase at a rate of 10 percent per year in MYs 2030–2032 and 8 percent per year in MYs 2033–2035 (NHTSA 2024).

Transportation Conformity

Transportation conformity is required by the CAA Section 176(c) (42 US Code [USC] 7506(c)) to ensure that federal funding and approval are given to highway and transit projects that are consistent with (and conform to) the air quality goals established by a SIP. The conformity requirement prohibits the US Department of Transportation and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to SIP for attaining the NAAQS. Conformity means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS (EPA 2025a).

Transportation conformity applies to highway and transit projects and takes place on two levels: the regional (or planning and programming) level and the project level. Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS. Regional conformity is based on emission analysis of regional transportation plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that include all transportation projects planned for a region over a period of at least 20 years (for the RTP) and 4 years (for the FTIP). For the purpose of this analysis, RTP and MTP are synonymous and meet the same federal standards; SACOG elects to identify its RTP as an MTP. RTP and FTIP conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the CAA and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization, Federal Highway Administration (FHWA), and Federal Transit Administration make the determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the CAA.

Note that this Draft EIR does not perform a Regional Plan CAA conformity analysis. Conformity documentation was performed separately by SACOG and is utilized in the impact discussion below. Conformity documentation is contained within Appendix H of the proposed 2025 Blueprint.

Air Toxics

The 1990 Amendments to the CAA included a provision to address air toxics. Under Title III of the CAA, EPA establishes and enforces National Emission Standards for Hazardous Air Pollutants (NESHAPs), which are nationally uniform standards oriented toward controlling particular hazardous air pollutants (HAPs). Section 112(b) of the CAA identifies 189 "Air Toxics" (HAPs, since modified to 187 pollutants), directs EPA to identify sources of the HAPs, and establishes a 10-year time period for EPA to issue technology-based emissions standards for each source category. Emission standards have been developed for all of the stationary source categories under 40 CFR Part 63. Title III of the CAA provides for a second phase under which EPA is to assess residual risk after the implementation of the first phase of standards and impose new standards, when appropriate, to protect public health.

In 2011, the EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers or contributors and noncancer hazard contributors from the National Air Toxics Assessment. These significant contributors include 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel PM, ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these the priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future EPA rules (FHWA 2023).

Emission Standards

EPA has adopted regulations to limit emissions from all sources of emissions. EPA regulates the emissions from mobile sources by setting standards for the specific pollutants being emitted. Emissions standards set limits on the amount of pollution a vehicle or engine can emit. Mobile source emission standards have been established for light-duty vehicles, trucks, and motorcycles; heavy duty trucks; and non-road engines, including aircraft, locomotives, marine vessels, and recreational engines and vehicles.

The CAA allows California to seek a waiver of the preemption which prohibits states from enacting emission standards for new motor vehicles. However, EPA must grant a waiver before California's rules may be enforced. When California files a waiver request, EPA publishes a notice for public hearing and written comment in the Federal Register. The written comment period remains open for a period of time after the public hearing. Once the comment period expires, EPA reviews the comments, and the Administrator determines whether the requirements for obtaining a waiver have been met (EPA 2025b).

According to the CAA (42 USC 7401 et seq.) Section 209(b) – State Standards, EPA shall grant a waiver unless the Administrator finds that California:

- was arbitrary and capricious in its finding that its standards are, in the aggregate, at least as protective of public health and welfare as applicable federal standards;
- does not need such standards to meet compelling and extraordinary conditions; or
- such standards and accompanying enforcement procedures are not consistent with Section 202(a) of the CAA.

A description of emission standards for sources analyzed in this Draft EIR are included herein.

Multi-Pollutant Emissions Standards for Light- and Medium-Duty Vehicles EPA has established a series of increasingly strict emission standards for new light-duty vehicle engines. These standards were phased-in over four tiers:

- Tier 1 standards were published as a final rule on June 5, 1991, and phased-in progressively between 1994 and 1997.
- Tier 2 standards were adopted on December 21, 1999, with a phase-in implementation schedule from 2004 to 2009.
- Tier 3 standards were finalized on March 3, 2014, to be phased-in between 2017 and 2025.
- Tier 4 standards were finalized on March 20, 2024, with a phase-in schedule from 2027 through 2033

Tier 1 standards applied to all new light-duty vehicles of less than 8,500-pound gross vehicle weight rating (GVWR). The Tier 2 rule extended the applicability of the light-duty emission standards to medium-duty passenger vehicles with GVWR between 8,500 and 10,000 pounds. Tier 3 and Tier 4 regulations additionally include emission standards for chassis-certified heavy-duty vehicles up to 14,000 pounds (Class 2b and Class 3). The successive tiers of emission regulations do not begin with a sharp cut-off date. Rather, each new tier of emission standards is phased-in over a number of years. During the phase-in period, manufacturers are required to certify an increasing percentage of their new vehicle fleet to the new standards, with the remaining vehicles still certified to the preceding tier of emission regulations (EPA 2025c).

Emission Standards for Heavy-Duty Vehicles

EPA and the National Highway Traffic Safety Administration (NHTSA) also set fuel efficiency and GHG standards for medium- and heavy-duty trucks. In 2011, EPA and NHTSA finalized a joint rule that established a national program to reduce GHG emissions and improve fuel economy for new medium- and heavy-duty engines and vehicles. These standards have the co-benefit of reducing air pollutants related to medium- and heavy-duty trucks. This rule—called the Phase 1 standards—requires fuel efficiency standards for engines in model years 2014 through 2018. In 2016, EPA and NHTSA adopted the Phase 2 standards, which requires fuel efficiency standards for engines in model years 2018 through 2027 (EPA 2016).

Emission Standards for Non-Road Diesel Engines

EPA established a series of increasingly strict emission standards for new non-road diesel engines. Tier 1 standards were phased in on newly manufactured equipment from 1996 through 2000 (year of manufacture), depending on the engine horsepower category. Tier 2 standards were phased in on newly manufactured equipment from 2001 through

2006. Tier 3 standards were phased in on newly manufactured equipment from 2006 through 2008. Tier 4 standards, which require advanced emission control technology to attain them, were phased in between 2008 and 2015. These emissions standards apply to all non-road (off-road) equipment used in construction (EPA 2004).

Emission Standards for Locomotives

The EPA established a series of increasingly strict emission standards for new or remanufactured locomotive engines (63 FR 18997-19084). Tier 0 standards, effective as of 2000, applied to engines manufactured or remanufactured from 1973 to 2001. Tier 1 standards applied to engines manufactured/remanufactured from 2002 to 2004. Tier 2 standards applied to engines manufactured/remanufactured after 2004.

In 2008, EPA strengthened the Tier 0 through 2 standards to apply to existing locomotives and introduced more stringent Tier 3 and 4 emission requirements (73 FR 88 25098-25352). Tier 3 standards, met by engine design methods, were phased in between 2011 and 2014. Tier 4 standards, which require exhaust gas after-treatment technologies, became effective starting in 2015.

STATE

Mulford-Carrel Act

CARB was established when the California Legislature passed the Mulford-Carrell Act in 1967, which combined two bureaus within the Department of Health: the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board. CARB's mission is to promote and protect public health, welfare, and ecological resources through the effective and efficient reduction of air pollutants, while recognizing and considering the effects on the State's economy. CARB also oversees the activities of 35 local and regional air pollution control districts. These districts regulate industrial pollution sources. They also issue permits, develop local plans to attain healthy air quality, and ensure that the industries in their area adhere to air quality mandates.

California Clean Air Act

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 California Ambient Air Quality Standards (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 sulfate, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The CAAQS and NAAQS are listed together in Table 3.3-1.

CARB 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 are incorporated into the SIP. In California, the EPA has delegated authority to prepare SIPs to CARB, which, in turn, has delegated that authority to individual air districts. CARB 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.

Toxic Air Contaminant Identification and Control Act of 1983 and Air Toxics "Hot Spots" Information and Assessment Act of 1987

California regulates TACs primarily through the Toxic Air Contaminant Identification and Control Act (Tanner Act) and the Air Toxics "Hot Spots" Information and Assessment Act of 1987 ("Hot Spots" Act). In the early 1980s, CARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The Tanner Act created

California's program to reduce exposure to air toxics. The "Hot Spots" Act supplements the Tanner Act by requiring a statewide air toxics inventory, notification of people who were exposed to a significant health risk, and facility plans to reduce these risks. The "Hot Spots" Act requires the Office of Environmental Health Hazard Assessment (OEHHA) to develop an approach for health risk assessments that can be used to determine the "likelihood of risks." The resultant guidance manual is titled Air Toxics Hot-Spots Program Guidance Manual for the Preparation of Health Risk Assessments (OEHHA 2015).

CARB has adopted diesel exhaust control measures and more stringent emissions standards for various transportation-related mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies.

CARB's 2022 Advanced Clean Fleets regulation was developed to reduce diesel PM through the transition of medium- and heavy-duty trucks to become fully electric by 2045. At the time of the writing of this DEIR, California has withdrawn its request for a waiver and authorization for the addition of the Advanced Clean Fleets regulation to its emissions control program (CARB 2025a). CARB is not enforcing the existing portions of the Advanced Clean Fleets regulation that require a federal waiver or authorization, such as the portions of the Advanced Clean Fleet regulation that apply to high priority and drayage fleets. However, not all elements of the Advanced Clean Fleets regulation require a federal waiver or authorization (CARB 2025b). The State and local government fleets portion of the Advanced Clean Fleets regulation remains unaffected.

CARB's 2022 amendments to the 2004 Transport Refrigeration Unit (TRU) Airborne Toxic Control Measure increases the stringency of TRU $PM_{2.5}$ regulations and requires the electrification of diesel-powered TRU trucks by 2029. In January 3, 2025, EPA granted California Clean Air Act authorization of elements of its TRU Regulation. However, in its action, EPA did not act on the zero-emission elements of the TRU Regulation regarding requirements for the turnover of at least 15 percent of the diesel-fueled truck TRU fleet to zero-emission TRU by December 31, 2023, (and each year thereafter). On January 13, 2025, CARB withdrew its request for authorization of these zero-emission TRU requirements (CARB 2025c). CARB has also adopted the Advanced Clean Trucks Regulation, which sets requirements for the transition of diesel trucks and vans to zero-emission trucks, which began in 2024.

Adopted regulations are also expected to continue to reduce formaldehyde emissions emitted by cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

Senate Bill 535 and Assembly Bill 1532 of 2012

SB 535 requires the California Environmental Protection Agency to identify disadvantaged communities based on geographic, socioeconomic, public health, and environmental hazard criteria. It also requires that the investment plan developed and submitted to the Legislature pursuant to AB 1532 allocate no less than 25 percent of available proceeds from the carbon auctions held under AB 32 to projects that will benefit these disadvantaged communities. At least 10 percent of the available funds from these auctions must be directly invested in such communities. Because CalEnviroScreen has been developed to identify areas disproportionately affected by pollution and those areas whose populations are socioeconomically disadvantaged, it is well suited for the purposes described by SB 535 (OEHHA 2022).

Emission Standards

CARB established a series of increasingly strict emissions standards for new off-road diesel equipment (Small Off-Road Engines [13 California Code of Regulations (CCR) 2403-2407] and Tier 4 Off-Road Compression Ignition Engine Regulations and Exhaust Emission Certification Test Fuel for Off-Road Spark-Ignition Engines, Equipment, and Vehicles [13 CCR 2421–2427]), on-road diesel trucks (California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles [13 CCR 1956]), and harbor craft (Low-Sulfur Fuel Requirement, Emission Limits, and Other Requirements for Commercial Harbor Craft [13 CCR 2299.6] and Airborne Toxic Control Measure for Commercial Harbor Craft [13 CCR 93118.5]).

CARB has also adopted emissions standards to reduce oxides of nitrogen (NO_X), diesel PM and other criteria pollutant emissions from in-use (i.e., existing) off-road diesel-fueled vehicles (Regulation for In-Use Off-Road Diesel-Fueled Fleets [13 CCR 2449]) and in-use on-road diesel-fueled vehicles (Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen, and Other Criteria Pollutants from In-Use Heavy-Duty Diesel-Fueled Vehicles [13 CCR 2025]).

Additionally, CARB established the Low Carbon Fuel Standard, the Phase 1 Tractor-Trailer GHG regulation, and the Advanced Clean Cars (ACC) Program (AB 1493 of 2002). In August 2022, CARB adopted the ACC II Program, which sets sales requirements to ultimately reach the goal of 100 percent zero-emission-vehicle sales in the state by 2035. The requirements of ACC II continue to be implemented at the time of writing this Draft EIR (EPA 2025b).

The In-Use Locomotive Regulation required operators of locomotives operating in California to deposit funds into a spending account based on the California emissions of the operator's locomotives in the preceding year, as well as requiring operators to follow a 30-minute idling limit on locomotives operating within California and annual reporting requirements. CARB rescinded its waiver request for the In-Use Locomotive Regulation in January 2025 (CARB 2025d).

While these standards, regulations, and programs predominately target GHG emissions, they also help reduce criteria air pollutant emissions. These standards, regulations, and programs are discussed in more detail in Section 3.7 "Greenhouse Gas Emissions and Energy."

Executive Order N-79-20

Under Executive Order N-79-20, 100 percent of in-state sales of new passenger cars and trucks are to be zero-emission by 2035; 100 percent of in-state sales of medium- and heavy-duty trucks and busses are to be zero-emission by 2045 for all operations, where feasible, and by 2035 for drayage trucks; and 100 percent of off-road vehicles and equipment sales are to be zero-emission by 2035 where feasible.

California Sustainable Freight Action Plan

The Sustainable Freight Action Plan, also known as the Action Plan, provides an integrated action plan that establishes clear targets to improve freight efficiency, transition to zero-emission technologies, and increase the competitiveness of California's freight system. The Action Plan was developed by several State agencies and is a recommendation document that integrates investments, policies, and programs across several State agencies to help realize a singular vision for California's freight transport system. The Action Plan provides a recommendation on a high-level vision and broad direction for State agencies to utilize when developing specific investments, policies, and programs related to the freight transport system that serves California's transportation, environmental, and economic interest.

Climate Change Scoping Plan

The first CARB Scoping Plan was adopted in 2008 and updated in 2014 to meet 2020 targets. The plan laid out the State's strategy for achieving the State's 2020 GHG reduction target. It includes numerous recommended measures to reduce GHG emissions from a variety of activities and sources, including on-road transportation, electricity generation, and building energy use. In 2017, the Scoping Plan was updated to reflect the State's 2030 reduction target. The 2017 Scoping Plan integrated several existing CARB regulations and State strategies, including the Cap-and-Trade Program, LCSF, SB 350 goals for renewable electricity procurement and doubling of statewide energy efficiency savings in electricity and natural gas end uses, Mobile Source Strategy, Sustainable Freight Action Plan, and the Short Lived Climate Pollutant Strategy. The 2017 Scoping Plan accelerated the State's focus on moving freight with zero and near-zero technologies, investing in renewables, creating walkable communities with expanded mass transit and other alternatives to traveling by car, continuing the cap-and-trade program, and managing natural lands to become carbon sinks. AB 1279, signed into law in September of 2022, codifies a goal for carbon neutrality and to reduce emissions by 85 percent below 1990 levels by 2045. These targets are in line with the scientifically established levels needed in the US to limit the rise in global temperature to no more than 2 degrees Celsius (°C), the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5 °C (United Nations 2015).

CARB adopted the *Final 2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) on December 16, 2022, which traces the State's pathway to achieve its carbon neutrality and an 85 percent reduction in 1990 emissions goal by 2045. It identifies the reductions needed by each GHG emission sector (e.g., transportation [including off-road mobile source emissions], industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste) to achieve these goals. The goals of the 2022 Scoping Plan are intended to be achieved through statewide rules and regulations, as well as through actions taken by local government. Examples of recent rules and regulations (some of which are also described above) which were adopted to support the goals of the 2022 Scoping Plan include:

- Zero Emission Forklifts (2024): identified in CARB's Mobile Source Strategy, SIP, and Sustainable Freight Action Plan as one of several near-term actions intended to help California meet its air quality and climate goals through zero-emission technology. Requires California fleets to phase out forklifts that utilize large spark-ignition (LSI) engines with a lift capacity of up to 12,000 pounds over time. The regulation implements a restriction on the purchase of LSI forklifts starting on January 1, 2026, and phase-out requirements starting on January 1, 2028, for existing LSI forklifts.
- ACC II (2022): Sets sales requirements to ultimately reach the goal of 100 percent zero-emission-vehicle sales in the state by 2035.
- Advanced Clean Trucks Regulation (2020): Requires manufacturers to sell an increasing percentage of heavy-duty zero-emission vehicles between 2024 and 2035 such that, by 2035, 40 percent of Class 8 truck purchases will be required to be zero emission. Fleets with 50 or more vehicles will be required to report on their fleet's composition and activities in order to help CARB craft new strategies to hasten the adoption of zero-emission vehicles.
- Advanced Clean Fleets (2022): Developed to reduce diesel PM through the transition of medium- and heavy-duty trucks to become fully electric by 2045.

While the Scoping Plan itself is a plan to reduce GHG emissions, many of the measures and strategies implemented to reduce GHGs from across the economy also result in reductions in criteria air pollutants (CARB 2022).

State Implementation Plan

California's SIP is updated periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. In September of 2022, CARB approved a statewide plan for attaining the federal health-based standard for ozone, typically experienced as smog. The 2022 State SIP Strategy is the most current SIP and is a compilation of plans and regulations that govern how the region and State will comply with the CAA requirements to attain and maintain the NAAQS for ozone and $PM_{2.5}$.

The 2022 SIP identifies the State's control strategy for meeting the federal 70 parts per billion, 8-hour ozone standard over the next 15 years. The 2022 SIP Strategy includes an unprecedented variety of new measures to reduce emissions from sources under the State's authority using all mechanisms available to transition away from combustion through regulations along with incentive and voluntary programs.

Executive Order N-19-19

Executive Order N-19-19 requires the Department of Finance to create a Climate Investment Framework and requires the State Transportation Agency to align transportation spending with achieving objectives of the Climate Change Scoping Plan, as well as to reduce VMT through strategic discretionary investments.

Air Quality and Land Use Handbook (2005) and Technical Advisory (2017)

CARB prepared a guidance document that includes recommendations for siting of sensitive receptors in proximity of emission sources. The Air Quality and Land Use Handbook: A Community Health Perspective (Land Use Handbook) provides guidance to the public and decision-makers to provide information on the siting of "sensitive land uses" near specific sources of air pollution (CARB 2005); namely:

- high traffic freeways and roads,
- distribution centers,

- rail yards,
- ports,
- refineries,
- chrome plating facilities,
- dry cleaners, and
- large gas dispensing facilities.

Table 3.3-2 outlines the CARB Land Use Handbook's advisory guidance on siting various sources, which recommends buffer zones in order to achieve a decrease in harmful levels of exposure to TACs by 80 percent. These recommendations do not account for site-specific design improvements (e.g., planting of vegetation, use of physical barriers) that could decrease the amount of air pollution exposure.

Table 3.3-2 CARB Handbook Recommendations on Siting New Sensitive Land Uses Such as Residences, Schools, Daycare Centers, Playgrounds, or Medical Facilities

Source Category	Advisory Recommendations
Freeways and High-Traffic Roads	Avoid 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.
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). Account for the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or CARB on the status of pending analyses of health risks.
Refineries	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry-cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. Avoid siting new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.

Source: CARB 2005.

CARB supplemented the Land Use Handbook in April 2017 to provide local planners and stakeholders with information regarding reducing exposure to traffic emissions near high-volume roadways in order to protect public health and promote equity and environmental justice. The Technical Advisory: Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways (Technical Advisory) includes various strategies to reduce pollution exposure through practices and technologies to reduce traffic emissions, increase dispersion of traffic pollution (or the dilution of pollution in the air), or remove pollution from the air (CARB 2017).

The Technical Advisory includes seven effective strategies, divided into the following three general categories (CARB 2017).

Strategies that Reduce Traffic Emissions

1. Speed reduction mechanisms including roundabouts
2. Traffic signal management
3. Speed limit reductions on high-speed roadways (>55 miles per hour [mph])

Strategies that Reduce the Concentration of Traffic Pollution

1. Urban design that promotes air flow and reduces the concentration of pollution along street corridors
2. Solid barriers such as sound walls
3. Vegetation that reduces the concentration of pollution

Strategies that Remove Pollution from Indoor Air

1. Indoor high efficiency filtration that removes pollution from the air

Siting of Schools

State law (Public Resources Code Section 21151.8) prohibits the siting of a school within 500 feet of a freeway unless "the school district determines, through analysis based on appropriate air dispersion modeling, that the air quality at the proposed site is such that neither short- term nor long-term exposure poses significant health risks to pupils." The siting of schools is also regulated in the California Code of Regulations. According to 5 CCR Section 14010(e): "The site shall not be adjacent to a road or freeway that any site-related traffic and sound level studies have determined will have safety problems or sound levels which adversely affect the educational program."

Air Toxics Control Measures (Health and Safety Code Division 26)

Under Health and Safety Code, Division 26 (Air Resources), CARB is authorized to adopt regulations to protect public health and the environment through the reduction of TACs and other air pollutants with adverse health effects. As such, CARB has promulgated several mobile and stationary source airborne toxic control measures that identify specific measures designed to reduce emissions and therefore the exposure of individuals to TACs emitted from a variety of sources.

Specifically, CARB has adopted regulations governing diesel emissions from compression-ignition engines (17 CCR 93115 et seq.), portable engines (17 CCR 93116 et seq.), and locomotives and marine vessels (17 CCR 93117, 93118 et seq., and 93119; and 13 CCR 2299 et seq.), and emissions from offroad engines, including construction equipment, cargo handling equipment, and recreational vehicles (13 CCR 2400 et seq.).

LOCAL

Air Districts

Local air districts attain and maintain air quality conditions in the plan area through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean-air strategy of the local air districts includes preparing plans for the attainment of the NAAQS and CAAQS (often across district boundaries for criteria pollutants with nonattainment areas of large geographies), adopting and enforcing rules and regulations concerning sources of air pollution, and issuing permits for stationary sources of air pollution. Air districts also inspect stationary sources of air pollution and respond to citizen complaints, monitor ambient air quality and meteorological conditions, and implement programs and regulations required by the CAA and CCAA. As noted previously, air districts have primary responsibility for the preparation, adoption, and implementation of stationary- and area-emission control measures, and for the preparation and amendment of SIPs. As part of the development of and revisions of SIPs, local air districts must achieve required reductions in emissions through the development and implementation of rules (Health & Safety Code Section 40702).

The CCAA requires air districts to endeavor to attain and maintain CAAQS by the earliest practicable date and develop plans for attaining the CAAQS. The 1994 federal plans satisfy State planning obligations, because all of the federal plans are also regional plans. As shown in Table 3.3-3, local air districts within the plan area have generally adopted separate plans for attaining the CAAQS. Air districts are also provided the option of developing CEQA guidance for projects that undergo environmental review within their jurisdiction. Typically, the significance of a project's air quality impacts is evaluated against a numerical, mass emissions threshold expressed in either tons per year or pounds per day (lb/day) for criteria pollutants and ozone precursors. A significance conclusion may also be determined through consistency with an applicable air quality plan.

For the purposes of this Draft EIR, the Sacramento Metropolitan Air Quality Management District (SMAQMD) is used as an example to describe the information that is generally included within each type of plan. This results from their role as the air district charged with regulating emissions in the Sacramento Valley Air Basin's (SVAB's) most populated county (i.e., Sacramento County). They also serve as a regional coordinator providing guidance to other air districts in the plan area.

SMAQMD prepared and submitted to CARB the 1991 Air Quality Attainment Plan (AQAP) in compliance with the requirements set forth in the CCAA, which specifically addressed the nonattainment status for ozone and, to a lesser extent, CO, and PM_{10}. At a public meeting held on October 26, 2023, CARB approved the 2023 Sacramento Regional Plan for the 2015 70 Parts Per Billion (ppb) 8-Hour Ozone Standard (2023 Plan). The 2023 Plan was prepared by the five local air districts of the Sacramento Federal Non-attainment Area (Sacramento Region, or Sacramento Federal Nonattainment Area [SFNA]), with the support of CARB.

On January 20, 1994, EPA classified Sacramento County as a "moderate" nonattainment area for the 24-hour PM_{10} NAAQS (58 FR 67334). Sacramento County attained the standard from 1998 to 2000 (67 FR 7082). After Sacramento attained the standard, SMAQMD submitted a PM_{10} Implementation/Maintenance Plan and Re-designation Request to EPA. EPA approved the first Implementation/Maintenance Plan for Sacramento County on September 26, 2013 (78 FR 59261), which covered the first 10-year maintenance period until 2023. The Second 10-year PM_{10} Maintenance Plan for Sacramento County, which shows maintenance of the 24-hour PM_{10} NAAQS from 2024 through 2033, was submitted to EPA as a revision to the California SIP on October 20, 2021, and the Final Rule became effective on April 15, 2024.

The Sacramento $PM_{2.5}$ planning region, which includes Sacramento County, eastern Yolo County, the western portions of El Dorado and Placer counties, and the northeast portion of Solano County, was classified as attainment for the 2012 annual average $PM_{2.5}$ NAAQS of 12 µg/m^3 and classified as nonattainment in 2009 for the 2006 24-hour $PM_{2.5}$ NAAQS of 35 µg/m^3. In 2013, the region prepared the *$PM_{2.5}$ Maintenance Plan and Redesignation Request* to address how the region attained and would continue to attain the 24-hour $PM_{2.5}$ standard.

On May 10, 2017, EPA found that the area attained the 2006 24-hour $PM_{2.5}$ NAAQS by the attainment date of December 31, 2015 (82 FR 21711). The $PM_{2.5}$ Maintenance Plan and Redesignation Request will be updated and submitted in the future based on the clean data finding made by the EPA.

In October 2016, the EPA revised the Treatment of Data Influenced by Exceptional Events rule (81 FR 68216) and determined Sacramento $PM_{2.5}$ Nonattainment Area is one of the areas in the nation subjected to mitigation plan requirements due to wildfires. In September 2018, the air districts in the nonattainment area adopted the *Wildfire Mitigation Plan for the Sacramento Federal Nonattainment Area for $PM_{2.5}$* in response to EPA's determination, with the most recent updates to the plan occurring in 2023. EPA promulgated the 9.0 µg/m^3 standard on February 7, 2024 which prompted CARB staff to submit the *$PM_{2.5}$ Area Designation Recommendations for the 2024 Annual $PM_{2.5}$ National Ambient Air Quality Standard*. As of March 2025, EPA has not assigned any attainment designations for the 2024 $PM_{2.5}$ annual standard. Also notably, no air district within the SVAB has prepared an air quality plan that addresses attainment of EPA's most recent update to the NAAQS that revised the $PM_{2.5}$ standard to 9 µg/m^3.

As stated above, SMAQMD is used as an example to describe the information that is generally included within each type of plan. Table 3.3-3 provides a summary of applicable air quality plans prepared by air districts within the 2025 Blueprint plan area.

Table 3.3-3 Applicable Air Quality Plans for the 2025 Blueprint Plan Area

Pollutant	Ambient Air Quality Standard	Applicable Air Quality Plan
Ozone	NAAQS 8-hour	▶ 1997 (2013 Revisions) Sacramento Regional 8-Hour Ozone Attainment and Reasonable further Progress Plan (EDCAQMD, FRAQMD, PCAPCD, SMAQMD, YSAQMD) ▶ 2008 (2017 Revisions) Sacramento Regional 8-hour Ozone Attainment Plan and Reasonable Further Progress Plan (EDCAQMD, FRAQMD, PCAPCD, SMAQMD, YSAQMD) ▶ 2023 Sacramento Regional Plan for the 2015 70-ppb 8-Hour Ozone Standard
	CAAQS 1-hour and 8-hour	▶ 2003 Triennial Assessment and Plan Update (EDCAQMD) ▶ 2012 Triennial AQAP (FRAQMD)

Pollutant	Ambient Air Quality Standard	Applicable Air Quality Plan
		▶ 2012 Triennial Progress Report (PCAPCD) ▶ 2015 Triennial Report and Air Quality Plan Revision (SMAQMD) ▶ 2012 Triennial Assessment and Plan Update (YSAQMD)
PM_{10}	NAAQS	▶ 2010 PM_{10} Implementation/Maintenance Plan and Redesignation Request for Sacramento County (SMAQMD) ▶ Second 10-year PM_{10} Maintenance Plan for Sacramento County
	CAAQS	▶ Staff Report – Implementation Schedule for SB 656[1] Measures to Reduce Particulate Matter (EDCAQMD) ▶ Staff Report – SB 656[1] Particulate Matter Emission Reduction Implementation Schedule (FRAQMD) ▶ Staff Report – Implementation Schedule for SB 656[1] Measures to Reduce Particulate Matter (PCAPCD) ▶ Final Staff Report – SB 656 Assessment and Control Measure Evaluation (SMAQMD) ▶ Staff Report – Implementation of SB 656[1] (YSAQMD)
$PM_{2.5}$	NAAQS	▶ $PM_{2.5}$2014 Yuba City-Marysville $PM_{2.5}$ Nonattainment Area Redesignation Request and Maintenance Plan (FRAQMD)
	CAAQS	▶ Staff Report – Implementation Schedule for SB 656[1] Measures to Reduce Particulate Matter (EDCAQMD) ▶ Staff Report – SB 656[1] Particulate Matter Emission Reduction Implementation Schedule (FRAQMD) ▶ Staff Report – Implementation Schedule for SB 656[1] Measures to Reduce Particulate Matter (PCAPCD) ▶ Final Staff Report – SB 656[1] Assessment and Control Measure Evaluation (SMAQMD) ▶ Staff Report – Implementation of SB 656[1] (YSAQMD)

Notes: NAAQS = national ambient air quality standards, CAAQS = California ambient air quality standards, EDCAQMD = El Dorado County Air Quality Management District, FRAQMD = Feather River Air Quality Management District, PCAPCD = Placer County Air Quality Management District, SMAQMD = Sacramento Metropolitan Air Quality Management District, YSAQMD = Yolo-Solano Air Quality Management District, SB = Senate Bill, PM_{10} = respirable particulate matter, $PM_{2.5}$ = fine particulate matter, CARB = California Air Resources Board.

[1] SB 656 (Statutes of 2003) required that CARB developed an approved list of readily available, feasible, and cost-effective control measures that may be employed by air districts to reduce PM_{10} and $PM_{2.5}$ emissions within an air basin.

Source: CARB 2025e.

As the 2025 Blueprint is a regional transportation plan, it is best evaluated for air quality impacts at the plan level, as opposed to the project level. In its CEQA guidance for a plan-level analysis SMAQMD recommends that CEQA lead agencies evaluate consistency with the Sacramento Regional Ozone Attainment Plan (OAP), which is required specifically for compliance with the CCAA and associated CAAQS, through consideration of the following:

- the plan's consistency with both the OAP and MTP population growth projections;
- the relationship between the plan's projected VMT and population growth (i.e., whether the two projections are proportional, or whether the VMT increases at a slower rate than population, indicating a mode shift); and
- the extent to which the plan implements OAP transportation control measures.

Consideration of the plan's consistency with the OAP is addressed as part of the conformity analysis discussed in the impact analysis below and provided as Appendix H to the 2025 Blueprint. Though the above refers specifically to SMAQMD's CEQA Guide for plan-level analysis, these consistency considerations are generally applicable to all the air districts within the plan area. For example, Yolo-Solano Air Quality Management District's (YSAQMD's) plan-level guidance, directs that consistency with the most recently adopted AQAP or SIP be evaluated for general plans. Additionally, the El Dorado Air Quality Management District (EDCAQMD), the Feather River Air Quality Management District (FRAQMD), the Placer County Air Quality Management District (PCAPCD), and the YSAQMD prepared separate triennial reports as described in Table 3.3-3.

However, not all elements of an air district's plan-level guidance may apply to the project. An example of this is SMAQMD's recommendation that projects require emissions reductions through implementation of an air quality management plan (AQMP). Because implementation of an AQMP requires plan-level policies to be implemented by developers during the planning stage, this guidance would not be applicable to a regional transportation plan such as the 2025 Blueprint.

Air District Rules and Regulations

All projects are subject to adopted air district rules and regulations in effect at the time of construction. Specific rules applicable to the construction of 2025 Blueprint projects may include, but are not limited to, those listed in Table 3.3-4.

Table 3.3-4 Local Air District Rules and Regulations Applicable to 2025 Blueprint Projects

Rule or Regulation	EDCAQMD	FRAQMD	PCAPCD	SMAQMD	YSAQMD
Visible Emissions	Rule 202	Rule 3-0	Rule 202	Rule 401	Rule 2-3
Cutback and Emulsified Asphalt Paving Materials	Rule 224	—	Rule 217	Rule 453	Rule 2-28
Application of Architectural Coatings	Rule 215	Rule 3-15	Rule 218	Rule 442	Rule 2-14
Fugitive Dust	Rule 223	Rule 3-16	Rule 228	Rule 403	—
General Permit Requirements	Rule 501	Rule 4-0	Rule 501	Rule 201	Rule 3-1
Nuisance	Rule 205	Rule 2.0.F.2	Rule 205	Rule 402	Rule 2-5
Wood-Burning Appliances	—	Rule 3-17	Rule 225	Rule 417	Rule 2-40

Sources: CARB 2024b

Air District Permits

Local air districts address stationary sources of pollution through the issuance of permits. Rules and processes (e.g., permit requirements) vary by district. Individual districts can, and have, implemented recommended protocols for addressing TACs within their regions.

Facilities with stationary equipment that may emit air pollution, or equipment used for controlling air pollution, are required to obtain permits to operate. Air districts grant two types of permits: Authority to Construct and Permit to Operate. An Authority to Construct permit is obtained prior to the building or installation of a new emissions unit and is required to modify an existing emissions unit. Following the construction, installation, or modification of the emissions unit, air district staff conduct an inspection to determine if the project was completed in accordance with the application submitted for the Authority to Construct permit. If the project is determined to comply with all applicable rules, regulations, and conditions, a Permit to Operate will be issued. In order to maintain the Permit to Operate, regular inspections are conducted by air district staff.

Air District Thresholds of Significance for Construction and Operational Criteria Air Pollutants

Local air districts have direct and indirect regulatory authority over sources of air pollution in the area of the 2025 Blueprint. CEQA requires that public agencies consider the potential adverse environmental impacts of any project that a public agency proposes to carry out, fund, or approve. In determining whether a project may have a significant effect on the environment, State CEQA Guidelines Section 15064.7 provides that lead agencies may adopt and/or apply "thresholds of significance." Consequently, the local air districts, as part of their responsibility to attain and maintain air quality standards in the plan area, recommend that lead agencies use the applicable district-recommended thresholds of significance when considering the air quality impacts of projects under their consideration (see Table 3.3-5).

In addition to developing thresholds of significance, the local air districts in the plan area have developed guidance for the purposes of CEQA compliance, which include analysis methods and mitigation strategies. CEQA thresholds of significance developed by air districts are tied to achieving or maintaining an attainment designation under the NAAQS and CAAQS, which are scientifically substantiated, numerical concentrations of criteria air pollutants considered to be protective or human health. Air districts use other federal guidance such as New Source Review to inform the development of thresholds. Air district–specific thresholds are typically numerical and apply to construction and operational emissions. Emissions shown to be above the thresholds would indicate that a project's discrete emission would result in a cumulative, regional contribution (i.e., significant) to the baseline attainment or nonattainment designation of an air basin. Air basins in nonattainment areas support ambient air conditions that, due to the exceedance of the NAAQS and CAAQS, could cause adverse health impacts to those residing in the basin.

Table 3.3-5 Thresholds of Significance for Criteria Air Pollutants of Concern in the Plan Area

Pollutant	EDCAQMD	FRAQMD	PCAPCD	SMAQMD	YSAQMD
Construction					
NO_X	82 lb/day	25 lb/day multiplied by the project length, not to exceed 4.5 tons/year*	82 lb/day	85 lb/day	10 tons/year
ROG	82 lb/day	25 lb/day multiplied by the project length, not to exceed 4.5 tons/year*	82 lb/day	None	10 tons/year
PM_{10}	A project is considered to have a significant impact on air quality if it will cause or contribute significantly to a violation of NAAQS or CAAQS	80 lb/day	82 lb/day	0 lb/day or 80 lb/day and 14.6 tons/year if all feasible BACT and BMPs are applied[1]	80 lb/day
$PM_{2.5}$	—	Not Yet Established	—	0 lb/day or 82 lb/day and 15 tons/year if all feasible BACT and BMPs are applied[1]	—
CO	A project is considered to have a significant impact on air quality if it will cause or contribute significantly to a violation of NAAQS or CAAQS	—	—	20 ppm (1-hr std) 9 ppm (8-hr std)	Violation of CAAQS for CO
Operation					
NO_X	82 lb/day	25 lb/day	55lb/day	65 lb/day	10 tons/year
ROG	82 lb/day	25 lb/day	55 lb/day	65 lb/day	10 tons/year
PM_{10}	A project is considered to have a significant impact on air quality if it will cause or contribute significantly to a violation of NAAQS or CAAQS	80 lb/day	82 lb/day	80 lb/day and 14.6 tons/year if all feasible BACT and BMPs are applied	80 lb/day
$PM_{2.5}$	—	Not Yet Established	—	82 lb/day and 15 tons/year if all feasible BACT and BMPs are applied	—
CO	A project is considered to have a significant impact on air quality if it will cause or contribute significantly to a violation of NAAQS or CAAQS	—	—	20 ppm (1-hr std) 9 ppm (8-hr std)	Violation of CAAQS for CO

Notes: El Dorado County Air Quality Management District; FRAQMD = Feather River Air Quality Management District; PCAPCD = Placer County Air Quality Management District; SMAQMD = Sacramento Air Quality Management District; YSAQMD = Yolo-Solano Air Quality Management District; NAAQS = national ambient air quality standards; CAAQS = California ambient air quality standards; ROG = reactive organic gas; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; CO = carbon monoxide; BACT = best available control technology; ppm = parts per million, lb/day = pounds per day; tpy = tons per year; BMPs = Best Management Practices

[1] According to the SMAQMD guidance, projects that do not implement SMAQMD's best management practices (BMPs) must meet a zero threshold for peak daily and annual emissions for PM_{10} and $PM_{2.5}$. With implementation of SMAQMD's BMPs, the SMAQMD's peak daily and annual thresholds increase to 80 lb/day or 14.6 tpy for PM_{10} and 82 lb/day or 15 tpy for $PM_{2.5}$.

Sources: EDCAQMD 2002; FRAQMD 2010; PCAPCD 2017; SMAQMD 2020; YSAQMD 2007.

SMAQMD has also developed a long-term operational mitigation protocol that requires the development of an air quality mitigation plan that reduces operational emissions of NO_X and reactive organic gas (ROG) by a minimum of 15 percent for projects identified in the SIP and 35 percent for projects not identified in the SIP. The other local air districts in the plan area have developed thresholds of significance and general CEQA guidance that contains recommended mitigation measures, but not to the extent of SMAQMD in terms of specific protocols.

Air Districts and TACs

Local air districts may adopt and enforce CARB control measures for TACs. Under Toxic New Source Review rules (e.g., Rule 523 for EDCAQMD), all new and modified stationary sources that possess the potential to emit TACs must obtain permits from the applicable local air district, as mentioned briefly above under the air district permit section. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including new-source review standards and TAC control measures. Local air districts in the plan area limit emissions and public exposure to TACs through a number of programs. The air districts prioritize TAC-emitting stationary sources based on the potency, quantity, and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors.

Sources that require a permit are analyzed by air districts through a health risk assessment (HRA) or screening analysis based on their potential to emit toxics. The algorithms, recommended exposure variates, cancer and noncancer health values, and the air modeling protocols needed to perform an HRA were most recently revised by OEHHA, as designated by CARB in February 2015.

Generally, conducting an HRA is a method of determining the exposure of sensitive receptors to TAC emissions based on a 70- or 30-year exposure period. There are four steps involved in the risk assessment process: 1) hazard identification, 2) exposure assessment, 3) dose-response assessment, and 4) risk characterization. Once emissions hazards have been identified pursuant to CARB's *Emission Inventory Criteria and Guidelines Regulations*, the next step is estimating exposures for those emitted substances for potential cancer risk or non-cancer health hazards for acute, repeated 8-hour, and chronic exposures. This involves emission quantification, modeling of environmental transport, evaluation of environmental fate, identification of exposure routes, identification of exposed populations, and estimation of exposure levels. Then a dose-response assessment is needed to characterize the relationship between exposure to an agent and incidence of an adverse health effect in exposed populations. This relationship is expressed in terms of a potency slope that is used to calculate the probability or risk of cancer associated with an estimated exposure or in terms of acute, 8-hour, and chronic exposure levels above which minimal adverse non-cancer health effects are anticipated in sensitive members of the general population.

The final step is risk characterization, where the results of the exposure assessment are combined with the results of the dose-response assessment in order to quantify both individual and population-wide health impacts through inhalation, dermal absorption, and ingestion. This may be done in one of two ways, either using the point estimate approach or the stochastic exposure assessment approach. The point estimate approach utilizes a combination of the average and high-end point estimates to more realistically estimate exposure in multi-pathway risk assessments and present cancer risk evaluations at individual receptors for 9, 30, and 70-year exposure durations. The stochastic exposure assessment utilizes distributions for exposure variates, such as breathing rate and water consumption rate, rather than a single point estimate, resulting in a range of risks that at least partially characterizes variability in exposure.

If it is determined that the project would emit toxics in excess of the applicable threshold of significance for TACs (e.g., 10 in one million), sources have to implement the best available control technology for TACs (T-BACT [Best Available Control Technology for Toxics]) to reduce emissions. If a source cannot reduce the risk below the threshold of significance even after T-BACT has been implemented, the local air district would deny the permit required by the source. This helps to prevent new problems and reduces emissions from existing older sources by requiring them to apply new technology when retrofitting with respect to TACs. It is important to note that the air quality permitting process applies only to stationary sources; properties that may be exposed to elevated levels of TACs from mobile sources (e.g., vehicles) and the mobile sources themselves are not subject to this process, or to requirements for T-BACT implementation. Rather, emissions controls on mobile sources are subject to regulations implemented on the state and federal levels.

However, as discussed in the environmental setting below and under State TAC regulations, there has been a considerable body of data developed in the past 10 years linking adverse health effects with traffic-generated TACs. These studies have resulted in the publication of guidelines not only at the state level (e.g., CARB Handbook and Technical Advisory, Guidance Manual), but also at the local level relative to the location of certain land uses near freeways and major roadways with high volumes of traffic and other sources of TACs not regulated through the permitting process.

For example, in July 2009, the California Air Pollution Control Officers Association (CAPCOA), building on the CARB Handbook, released the *Health Risk Assessments for Proposed Land Use Projects Guidance Document* (CAPCOA Guide) to assist lead agencies in complying with the requirements of CEQA. The CAPCOA Guide outlines the recommended procedures to identify when a project should undergo further risk evaluation, how to conduct an HRA, and what mitigation measure may be appropriate for various land use projects (CAPCOA 2009). In addition, because CARB recommendations have major implications for land development projects, local air districts within the plan area often adopt their own protocols for assessing health risk issues. For the purposes of this Draft EIR, as the air district charged with regulating emissions in SVAB's most populated county (i.e., Sacramento County) as well as developing thresholds of significance based on substantial evidence, SMAQMD is used as an example to describe the information that is generally included within these protocols.

SMAQMD developed the Mobile Sources Air Toxics Protocol (MSAT Protocol) in April 2019, and the *Guidance Document for the Mobile Sources Air Toxics Protocol* in September of 2020. The MSAT Protocol provides guidance to local land use jurisdictions on assessing and disclosing potential cancer risk and $PM_{2.5}$ concentrations from major roadways and railways. SMAQMD's Board of Directors approved the MSAT Protocol on January 25, 2018. The MSAT Protocol replaces the Recommended Protocol for the Evaluation of Sensitive Receptors Adjacent to Major Roadways. The MSAT Protocol includes a risk mapping tool, a guidance document, a detailed methodology document, and is complemented by guidance on exposure reduction measures. Notably, the risk mapping tool applies only to Sacramento County.

SMAQMD also highly recommends incorporating best practices to reduce pollutant exposure for all projects contemplated within 500 feet of a freeway or major roadway. Studies indicate that in some situations roadway pollutant dispersion extends further than 500 feet, while still presenting an elevated risk for exposure. However, this extended dispersion area is dependent on specific local factors such as the area's meteorology (Choi et al. 2012) or the presence or absence of sound and vegetative barriers (Steffans et al. 2013). Therefore, the 500-foot buffer is used as the general standard, based on the State's current set-back requirement for schools (Pub. Resources Code, 21151.8) and CARB's recommendations on siting for housing and sensitive land uses as well as its recent Technical Advisory (CARB 2005 and 2017). The discussion under Impact 3.3-3 was performed in consideration of the MSAT Protocol consistent with guidance provided from SMAQMD.

Odors

Air districts typically recommend that operational odor impacts be evaluated under CEQA. In its CEQA Guidance, SMAQMD, for example, provides recommended odor screening distances (Table 3.3-6) to evaluate odor impacts when siting new sensitive land uses. Other districts recommend that odor impacts be deemed significant if an average of 5 or more confirmed complaints per year occur in a new source area averaged over 3 years.

Table 3.3-6 SMAQMD Recommended Odor Screening Distances

Land Use/Type of Operation	Project Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	2 miles
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	4 miles

Land Use/Type of Operation	Project Screening Distance
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	2 miles
Metal Smelting Plants	1 mile

Note: Odor Screening distances should not be used as absolute thresholds of significance for an odor significance determination.

Source: SMAQMD 2022.

GENERAL PLANS

The most comprehensive land use planning for the SACOG region is provided by city and county general plans, which local governments are required by State law to prepare as a guide for future development. The general plans of each city and county contain goals and policies concerning topics that are mandated by State law (i.e., land use, circulation, housing, conservation, open space, noise, safety) or which the jurisdiction has chosen to include (e.g., natural resources, parks and recreation, agricultural, air quality).

Jurisdictions may choose to adopt an optional air quality element or include policies related to air quality in other general plan elements. In general, local planning policies related to air quality are established to reduce exposure to air pollutants and safeguard public health through compact development; alternative transportation modes; energy conservation; cleaner-fuel vehicles; reductions for particulate emissions from roads, construction sites, and fireplaces; and public education programs.

3.3.2 Environmental Setting

The plan area is characterized by several urban centers that would continue to have population and urban growth. Air quality can be directly affected by the type and density of land use change and population growth in urban and rural areas. Air quality conditions are characterized by the concentrations of various pollutants in that area. The concentration of a given pollutant in the atmosphere is determined by the amount of the pollutant released and the atmosphere's ability to transport and dilute. Air pollution transport and dilution are mostly determined by wind, atmospheric stability, terrain, and insolation (i.e., solar energy).

The plan area consists of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties, excluding the portions of El Dorado and Placer counties located in the Tahoe Basin. When determining regional conformity pursuant to CAA requirements as outlined in the Transportation Conformity Rule, the eastern portion of Solano County is analyzed as part of the emissions analysis (EPA 2012). However, for purposes of this Draft EIR, impacts are limited to the plan area, which does not include Solano County. Figure 3.3-1 shows the federal air quality planning boundaries within the plan area.

The majority of the plan area is located within the SVAB, which spans from Shasta County in the north to Sacramento County in the south, and encompasses the western portion of Placer County as well as Sacramento, Sutter, Yolo, and Yuba counties. The eastern portion of Placer County, excluding the section within the Tahoe Basin, and the western portion of El Dorado also excluding the eastern section within the Tahoe Basin, are located within the Mountain Counties Air Basin (MCAB), which extends from Plumas County down to Mariposa County. Air quality conditions in the plan area are regulated by EPA, CARB, and the five local air districts with jurisdiction over portions of the plan area (i.e., EDCAQMD, FRAQMD, PCAPCD, SMAQMD, and YSAQMD).

CLIMATE AND TOPOGRAPHY

The SVAB is bounded by the Sierra Nevada Mountain Range to the east and the Coastal Mountain Ranges to the west. Topography in the Sacramento Valley is generally flat, with elevations anywhere from slightly below sea level near the Sacramento/San Joaquin Delta to over 2,150 feet above sea level at the Sutter Buttes.

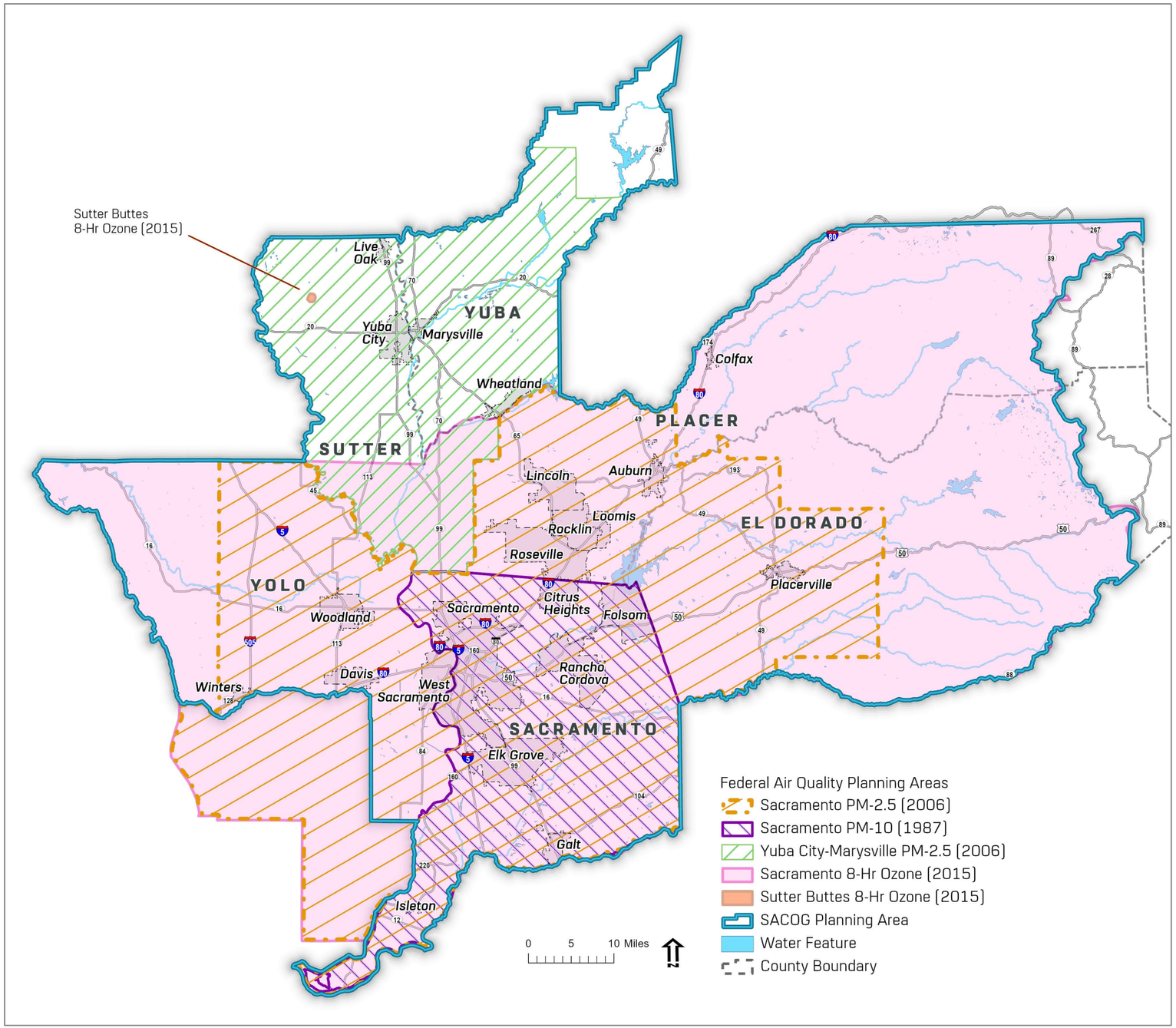
Hot dry summers and mild rainy winters characterize the Mediterranean-type climate of the plan area. The temperature may range during the year from around 20 to 115 degrees Fahrenheit, with summer highs usually in the 90s and winter lows occasionally below freezing. Average annual rainfall is about 15 inches, about 75 percent of which occur during the rainy season generally from November through March. Light and infrequent thunderstorms may occur at any time of year, typically whenever cool, moist air moves in to break a prolonged hot spell. Humidity levels vary within the region, often dropping below 10 percent in the warm season, while increasing during colder months to form shallow layers of ground fog (i.e., tule fog) in the valley. The prevailing winds are moderate in strength, primarily from the south or southeast (WRCC 2002).

The mountains surrounding the SVAB create a barrier to airflow, which can trap air pollutants when certain meteorological conditions exist. The highest frequency of air stagnation occurs between mid-November and mid-January when large high-pressure cells lie over the SVAB. The lack of surface wind during these periods, and the reduced vertical flow caused by less surface heating, reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with smoke or when temperature inversions trap cool air, fog and pollutants near the ground. The ozone season (May through October) in the SVAB is characterized by stagnant morning air or light winds, with the Delta sea breeze arriving in the afternoon out of the southwest. In addition, longer daylight hours provide a plentiful amount of sunlight to fuel photochemical reactions between ROG and NO_X, which result in ozone formation.

As an air basin, air quality in the SVAB is impacted not only by pollutants generated within the region, but also by pollutants generated in the San Francisco Bay and the San Joaquin Valley. The delta breeze travels in from the ocean and through the Carquinez Strait then turns northward, carrying air pollution from the Bay Area and San Joaquin Valley across the south border of the SVAB; similarly, air pollution can travel back to the San Joaquin Valley when the wind blows out of the north through the SVAB. The effect of pollutants on the SVAB transported from the San Francisco Bay or from the San Joaquin Valley can vary from substantial to inconsequential on any given day, largely determined by accompanying meteorological conditions. Thus, the success of the SVAB in attaining better air quality is partially contingent on the achievement of better air quality in nearby areas; however, air pollution from within the basin is typically the most important.

Air quality in the MCAB is impacted by locally generated emissions from vehicle traffic, as well as the transport of pollutants generated in the SVAB, the San Francisco Bay, and the San Joaquin Valley by eastward winds. The MCAB includes the central and northern Sierra Nevada Mountains. Elevations range from several hundred feet in the foothills to over 10,000 feet above mean sea level along the Sierra crest.

The general climate of the MCAB varies considerably with elevation and proximity to the Sierra ridge. The terrain features of the basin make it possible for various climates to exist in relatively close proximity. The pattern of mountains and hills causes a wide variation in rainfall, temperature, and localized winds throughout the basin. Temperature variations have an important influence on basin wind flow, dispersion along mountain ridges, vertical mixing, and photochemistry. The Sierra Nevada receives large amounts of precipitation from storms moving in from the Pacific in the winter, with lighter amounts from intermittent "Monsoonal" moisture flows from the south and cumulus buildup in the summer. Precipitation levels are high in the highest mountain elevations but decline rapidly toward the western portion of the basin. Winter temperatures in the mountains can be below freezing for weeks at a time, and substantial depths of snow can accumulate, but in the western foothills, winter temperatures usually dip below freezing only at night and precipitation is mixed as rain or light snow. In the summer, temperatures in the mountains are mild, with daytime peaks in the 70s to low 80s, but the western end of the basin can routinely exceed 100 degrees Fahrenheit. From an air quality perspective, the topography and meteorology of the MCAB combine such that local conditions predominate in determining the effect of emissions in the basin. Regional airflows are affected by the mountains and hills, which direct surface air flows, cause shallow vertical mixing, and create areas of high pollutant concentrations by hindering dispersion. Inversion layers, where warm air overlays cooler air, frequently occur and trap pollutants close to the ground. In the winter, these conditions can lead to CO "hotspots" along heavily traveled roads and at busy intersections. During summer's longer daylight hours, stagnant air, high temperatures, and plentiful sunshine provide the conditions and energy for the photochemical reaction between ROG and NO_x that results in the formation of ozone. In the summer, the strong upwind valley air flowing into the basin from the Central Valley to the west is an effective transport medium for ozone precursors and ozone generated in the Bay Area and the Sacramento and San Joaquin valleys. These transported pollutants predominate as the cause of ozone in the MCAB and are largely responsible for the exceedances of the state and federal ozone AAQS in the MCAB (EDCAQMD 2002).



Source: Prepared by SACOG in 2025.

Figure 3.3-1 Federal Air Quality Planning Boundaries

CRITERIA AIR POLLUTANTS AND SOURCES

Ozone

Ozone is a photochemical oxidant (a substance whose oxygen combines chemically with another substance in the presence of sunlight) and the primary component of smog. Ozone is not directly emitted into the air but is formed through complex chemical reactions between precursor emissions of ROG and NO_X in the presence of sunlight. ROG are volatile organic compounds (VOCs) that are photochemically reactive. For the purposes of this CEQA analysis, ROG are used consistently and represent the same group of emissions as VOCs. ROG emissions result primarily from incomplete combustion and the evaporation of chemical solvents and fuels. NO_X are a group of gaseous compounds of nitrogen and oxygen that result from the combustion of fuels.

Acute health effects of ozone exposure include increased respiratory and pulmonary resistance, cough, pain, shortness of breath, and lung inflammation. Chronic health effects include permeability of respiratory epithelia and possibility of permanent lung impairment (EPA 2025d).

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2. The combined emissions of NO and NO_2 are referred to as NO_X and are reported as equivalent NO_2. Because NO_2 is formed and depleted by reactions associated with ozone, the NO_2 concentration in a geographic area may not be representative of the local sources of NO_X emissions (EPA 2024a).

Acute health effects of exposure to NO_X include coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis, pulmonary edema, breathing abnormalities, cyanosis, chest pain, rapid heartbeat, and death. Chronic health effects include chronic bronchitis and decreased lung function (EPA 2025d).

Particulate Matter

PM_{10} consists of particulate matter emitted directly into the air, such as fugitive dust; soot; smoke from mobile and stationary sources, construction operations, and fires; natural windblown dust; and smog. In addition, controlled human exposure studies have shown that exposure to elevated levels of PM_{10} causes adverse health effects, especially related to the inhibition of lung functions and an increase in respiratory and cardiovascular afflictions, as well as cancer risks. PM_{10} causes a greater health risk than larger particles because fine particles are too small for the natural filtering process of the human body and can more easily penetrate the defenses of the human respiratory system. Individuals with preexisting respiratory or cardiovascular disease are especially susceptible to the adverse effects of PM_{10} exposure, as are asthmatic children and the elderly. Children exposed to high concentrations of PM_{10} for prolonged periods also exhibit decreased immune function. Additionally, associations between long-term exposure to PM_{10} and adverse cognitive effects, such as faster cognitive decline, including memory and attention span loss, are being further examined by health researchers.

Because $PM_{2.5}$ is smaller than PM_{10}, it can more deeply penetrate the human body through inhalation, allowing many chemicals harmful to human health to be carried to internal organs. Long-term exposure to these particulates can increase the chance of chronic respiratory disease and cause lung damage and irregular heartbeat. Short-term exposure can aggravate respiratory illnesses, such as bronchitis and asthma, and cause heart attacks and arrhythmias in people with heart disease. Additionally, an estimated 9,000 people die prematurely each year in California as a result of $PM_{2.5}$ exposure (CARB 2010). A safe threshold for $PM_{2.5}$ has not been established, and research indicates that health effects exist at low concentrations.

Toxic Air Contaminants

According to the *California Almanac of Emissions and Air Quality* (CARB 2013), the majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being diesel PM. Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances.

Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emissions control system is being used. Unlike the other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. However, CARB has made preliminary concentration estimates based on a PM exposure method. This method uses the CARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of diesel PM. In addition to diesel PM, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene.

Diesel PM poses the greatest health risk among the 10 TACs mentioned. Based on estimated ambient statewide diesel PM levels in 2012, the current cancer risk is estimated to be 520 new cases of cancer projected to occur per million residents exposed (CARB n.d.). Overall, statewide emissions of diesel PM are forecasted to decline by 71 percent between 2000 and 2035 (CARB 2013: 3-8). Concentrations of diesel PM are generally greatest near highways with large volumes of diesel truck traffic and adjacent to stationary sources such as refineries, dry-cleaning establishments and gasoline dispensing facilities. Major roadways within the SACOG region include Interstate 80, Interstate 5, US Route 50, California State Route 99, and California State Route 65. Roadway sources of TACs in the plan area are identified in Figure 3.3-2.

Naturally Occurring Asbestos

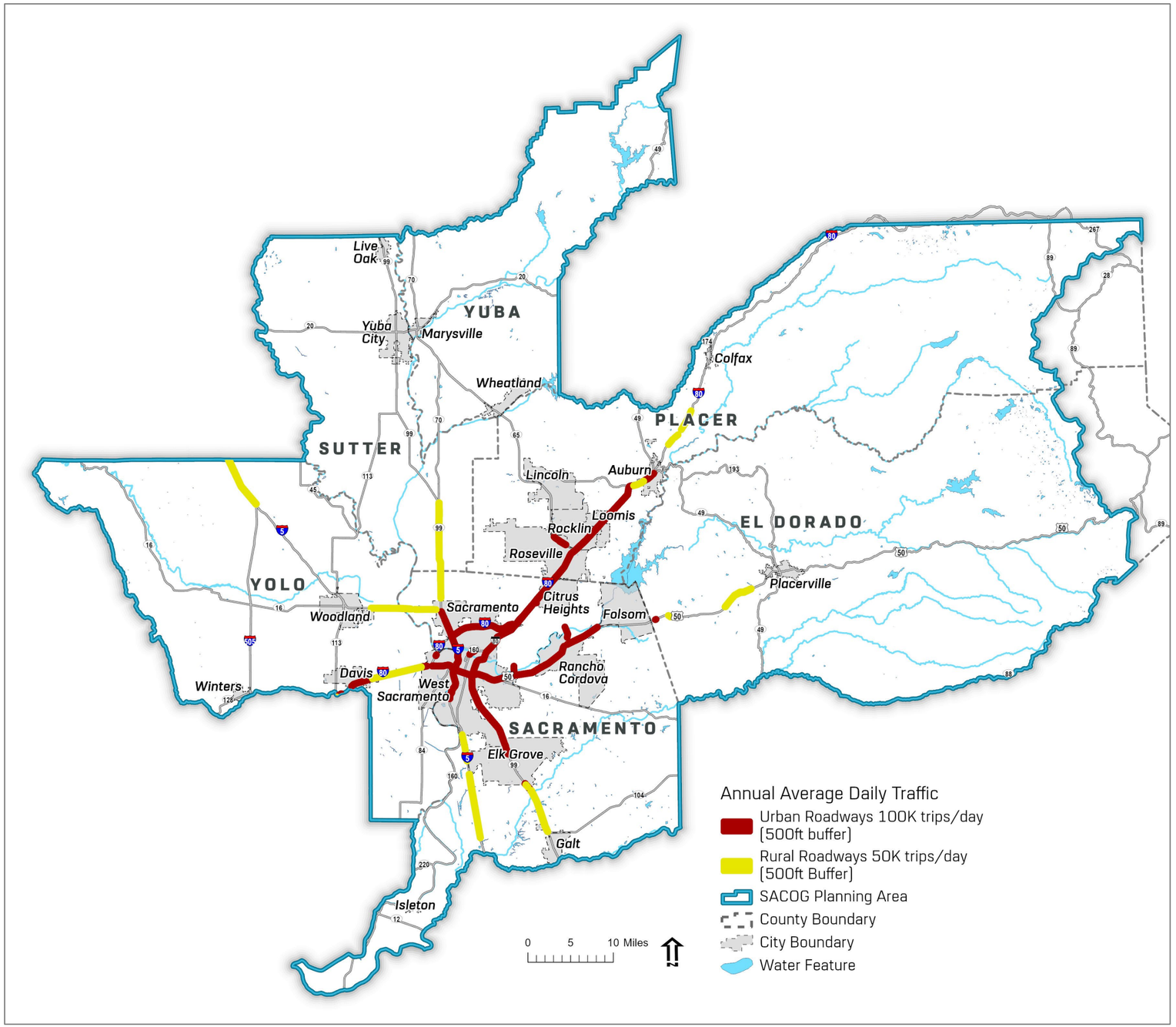
Asbestos is the common name for a group of naturally occurring fibrous silicate minerals that can separate into thin but strong and durable fibers. Naturally occurring asbestos (NOA), which was identified as a TAC by CARB in 1986, is located in many parts of California and is commonly associated with serpentine soils and rocks. In general, the greater the exposure to asbestos, the greater the chance of developing harmful health effects such as lung cancer, mesothelioma, and asbestosis (a long term, non-cancerous disease of the lungs) (EPA 2025d).

Areas identified as containing or potentially containing NOA are located throughout the SACOG region, with the greatest concentration being located in El Dorado County. The Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California Map prepared by the US Geological Survey shows the distribution and geologic characteristics of the reported asbestos occurrences in California (El Dorado County 2004). Additionally, an asbestos map of western El Dorado County prepared by the County of El Dorado shows the location of individual parcels and areas in four categories that either contain NOA or are considered to be subject to elevated risk of containing NOA (El Dorado County 2018).

Asbestos could be released from serpentinite or ultramafic rock if the rock is broken or crushed. Asbestos could also be released into the air due to vehicular traffic on unpaved roads on which asbestos-bearing rock has been used as gravel. Additionally, disturbed soil derived from asbestos-bearing rock could contain asbestos and has the potential to release asbestos. At the point of release, asbestos fibers can become airborne, causing air quality and human health hazards. Natural weathering and erosion processes act on asbestos bearing rock and soil, increasing the likelihood for asbestos fibers to become airborne if disturbed (California Geological Survey 2002: 22). Figure 3.3-3 identifies locations in the plan area where serpentinite soils have been identified.

Odors

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). Odor is inherently complex because it is often caused by a mixture of chemical substances and has subjective components associated with human perception by the olfactory senses. Odorants (i.e., odor-causing chemicals) are often complex mixtures of chemical substances, and even slight changes in the chemical composition of the mixtures can greatly affect how humans perceive a particular odor. Some odors can also be caused by very minute levels of odorants (sometimes in the parts-per-trillion range) that can be detected by human noses but are well below instrumental or laboratory detection levels. Human noses, on the other hand, are well-adapted at distinguishing specific odors in complex environments.



Source: Prepared by SACOG in 2025.

Figure 3.3-2 High Volume Roadways in the Plan Area

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity. Traditional odor sources of concern include wastewater treatment plants, sanitary landfills, composting facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting operations, rendering plants, and food packaging plants. These types of odor sources exist throughout the SACOG region.

REGIONAL ATTAINMENT STATUS

Federal and State governments, specifically EPA and CARB, each establish ambient air quality standards for several criteria air pollutants (NAAQS and CAAQS, as shown in Table 3.3-1) to address the health impacts of the exposure of people, especially sensitive populations, to hazardous concentrations of criteria air pollutants, and are periodically updated. The primary standards have been set to protect public health (e.g., avoidance of developing illnesses) while the secondary standards are protective of public welfare (e.g., protection of crops, protection of materials, or avoidance of nuisance conditions). For some pollutants, multiple standards have been set, some for different periods of time (averaging times). Air pollutant concentrations measured in various locations within an air basin are compared to the NAAQS and CAAQS to determine the attainment status of that air basin. Attainment status is a classification of regional air quality that describes whether an air basin is meeting the standards (attainment) or not (nonattainment).

California is divided into 15 air basins characterized by similar meteorological and geographic conditions, which are regulated by 35 air districts. Air pollutant concentrations in these air basins are monitored at stations throughout the state. The plan area includes five air districts in the southern portion of the SVAB and the mid-northern portion of the MCAB. Various portions within these basins have been classified as either attainment or nonattainment for NAAQS and CAAQS. Ozone, PM_{10}, $PM_{2.5}$, carbon monoxide (CO), NO_2, sulfur dioxide (SO_2), and lead are monitored in the plan area.

Ozone

The *2018 Sacramento Regional 2008 8-Hour Ozone Attainment and Further Reasonable Progress Plan* was approved by CARB on November 16, 2017. The previous 2013 Update to the 8-Hour Ozone Attainment and Reasonable Further Progress Plan was approved and promulgated by EPA for the 1997 8-Hour Ozone Standard. At a public meeting held on October 26, 2023, CARB voted to approve the *Sacramento Regional 70 ppb 8-Hour Ozone Attainment and Reasonable Further Progress Plan*. The *Sacramento Regional 70 ppb 8-Hour Ozone Attainment and Reasonable Further Progress Plan* was prepared by the five local air districts of the SFNA with the support of CARB. SFNA requested a reclassification to "severe" with an attainment deadline of August 3, 2033. The 2023 Sacramento Regional Plan for the 2015 70 ppb 8-Hour Ozone Standard addresses the CAA requirements associated with the "severe" classification and how SFNA can attain the standard by the attainment date. The *Sacramento Regional 70 ppb 8-Hour Ozone Attainment and Reasonable Further Progress Plan* is an AQAP that is applicable to development in the 2025 Blueprint plan area. See Table 3.3-7 for the designation values of each nonattainment classification for the 2008 NAAQS.

Table 3.3-7 Ozone Nonattainment Designations for the 2015 NAAQS

Classification	Description
Extreme	Area has a concentration of 0.163 ppm and above.
Severe 17	Area has a concentration of 0.111 up to but not including 0.163 ppm.
Severe 15	Area has a concentration of 0.105 up to but not including 0.111 ppm.
Serious	Area has a concentration of 0.093 up to but not including 0.105 ppm.
Moderate	Area has a concentration of 0.081 up to but not including 0.093 ppm.
Marginal	Area has a concentration of 0.071 up to but not including 0.081 ppm.

Source: EPA 2024b.

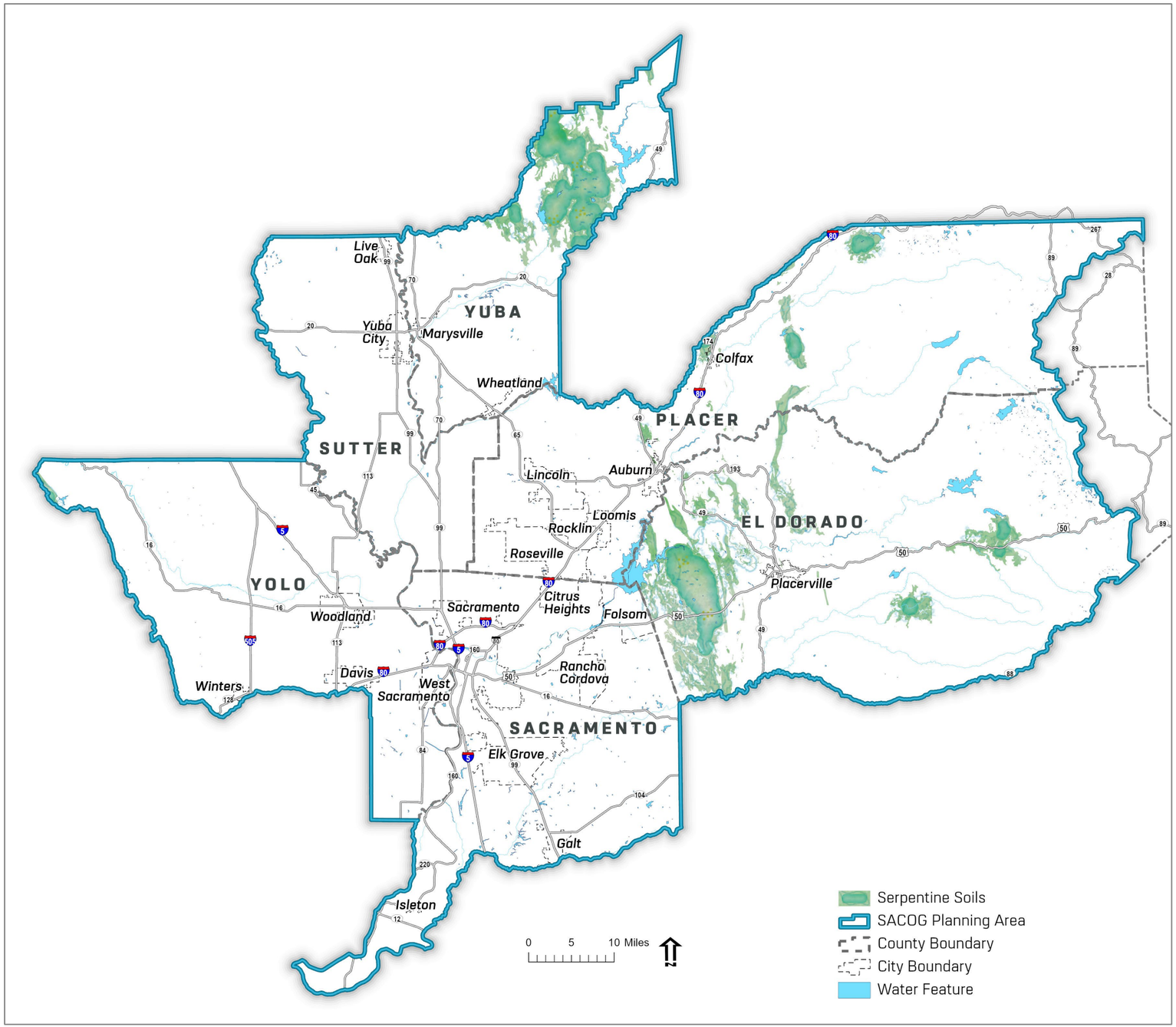
All six counties which comprise the plan area are designated as nonattainment for the ozone CAAQS (CARB 2023.

Tables 3.3-8 and 3.3-9 show the average number of days that the NAAQS and CAAQS were exceeded from 2012 through 2023, the most recent years for which is are currently available.

PM_{10}

EPA designated Sacramento County as a moderate nonattainment area for PM_{10} in 1994. The area monitored for PM_{10} consists solely of Sacramento County, though the five remaining counties in the plan area are designated nonattainment for the CAAQS and unclassified or attainment areas for the NAAQS. Sacramento County attained the PM_{10} NAAQS by the attainment deadline of 2000 and has been demonstrating maintenance since then. EPA approved the *PM_{10} Implementation/Maintenance Plan and Redesignation Request for Sacramento County* effective October 28, 2013, showing the 1987 standard for PM_{10} was attained and establishing the strategy for maintaining the standard through 2022. The First Maintenance Plan showed that PM_{10} and NO_X emissions are not contributors of the ambient PM_{10} concentrations in Sacramento County. The Second Maintenance Plan was approved March 14, 2024, effective April 15, 2024, for 10 years and is effective until 2032. Volatile organic compounds were not identified as contributing to the PM_{10} concentrations and, therefore, are not included in the Second Maintenance Plan (SMAQMD 2021. The second 10-year maintenance period will end in 2032, at which point the area may be redesignated from a maintenance area to an attainment area.

Tables 3-10 and 3-11 show the average number of days that the NAAQS and CAAQS for PM_{10} were exceeded from 2012 through 2023, the most recent years for which data is currently available.



Source: Prepared by SACOG in 2025.

Figure 3.3-3 Serpentine Soils in the Plan Area

Table 3.3-8 Number of Days above the NAAQS 8-Hour Standard[1] for Ozone

Monitoring Sites	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023[2]
El Dorado County												
Cool-Highway 193	8	4	10	13	19	28	26	3	7	13	12	5
Echo Summit	1	0	0	*	2	1	10	0	7	6	1	1
Placerville-Canal Street	*	*	*	*	*	*	*	*	*	*	2	1
Placerville-Gold Nugget Way	20	11	12	19	41	18	28	4	20	10	0	*
Placer County												
Auburn-11645 Atwood Road	13	1	6	15	27	28	35	8	22	34	13	0
Colfax-City Hall	7	1	2	12	14	14	30	*	*	*	*	*
Lincoln-1445 1st St.	0	0	1	4	11	11	*	*	*	*	*	*
Lincoln-2885 Moore Road	*	*	*	*	*	*	0	3	9	15	1	0
Roseville-N Sunrise Blvd	13	0	10	6	20	9	11	1	3	4	3	8
Sacramento County												
Elk Grove-Bruceville Road	5	0	0	2	1	3	2	4	2	5	1	0
Folsom-Natoma Street	38	6	14	11	23	17	18	2	0	29	3	5
North Highlands-Blackfoot Way	11	0	3	8	7	5	10	2	5	0	0	*
Sacramento-Del Paso Manor	12	3	1	8	10	5	6	0	10	17	3	9
Sacramento-Goldenland Court	4	0	1	4	8	0	*	*	*	*	*	*
Sacramento-T Street	4	0	0	4	3	3	1	1	3	1	3	1
Sloughhouse	18	2	5	14	17	6	4	1	5	13	5	0
Sutter County												
Sutter Buttes-S Butte	7	1	3	7	30	0	18	0	9	12	3	2
Yuba City-Almond Street	0	0	1	1	0	2	1	0	2	4	0	0
Yolo County												
Davis-UCD Campus	1	0	0	1	1	1	1	0	0	2	1	0
Woodland-Gibson Road	2	0	0	3	4	2	2	0	2	2	1	1

Note: NAAQS = national ambient air quality standards

*There was insufficient (or no) data available to determine the value.

[1] Following the adoption of the 2015 8-Hour Ozone Standard, years 2015 through 2018 are measured against the 2015 8-Hour Ozone Standard.

[2] 2023 is the most recent year of data available.

Source: CARB 2025a.

Table 3.3-9 Number of Days Per Year CAAQS 8-Hour Standard for Ozone

Monitoring Sites	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023[1]
El Dorado County												
Cool-Highway 193	16	10	35	13	20	28	26	4	8	13	13	5
Echo Summit	11	1	2	*	3	1	10	0	7	6	1	1
Placerville-Canal Street	*	*	*	*	*	*	*	*	*	*	2	1
Placerville-Gold Nugget Way	50	21	36	23	45	21	31	4	20	10	0	*
Placer County												
Auburn-11645 Atwood Road	34	6	17	16	27	30	36	8	23	37	14	0
Colfax-City Hall	16	5	6	13	17	16	33	*	*	*	*	*
Lincoln-1445 1st St.	0	2	4	5	12	11	*	*	*	*	*	*
Lincoln-2885 Moore Road	*	*	*	*	*	*	0	4	12	17	1	0
Roseville-N Sunrise Blvd	28	8	21	6	21	10	11	3	4	5	4	8
Sacramento County												
Elk Grove-Bruceville Road	11	0	2	2	1	3	2	6	2	5	1	0
Folsom-Natoma Street	57	17	35	11	24	19	19	2	0	30	4	6
North Highlands-Blackfoot Way	21	6	13	8	17	9	10	2	8	0	0	*
Sacramento-Del Paso Manor	21	7	18	8	11	5	7	0	10	18	3	2
Sacramento-Goldenland Court	7	2	4	6	8	0	*	*	*	*	*	*
Sacramento-T Street	9	0	4	4	3	3	1	1	3	1	3	2
Sloughhouse	25	5	10	14	17	7	4	2	6	13	5	2
Sutter County												
Sutter Buttes-S Butte	16	5	9	7	33	0	19	0	12	16	3	3
Yuba City-Almond Street	2	0	3	1	0	2	1	0	2	5	0	0
Yolo County												
Davis-UCD Campus	4	0	0	1	1	1	1	0	0	3	1	0
Woodland-Gibson Road	9	0	1	4	4	2	2	0	2	2	2	1

Note: CAAQS = California ambient air quality standards

*There was insufficient (or no) data available to determine the value.

[1] 2023 is the most recent year of data available.

Source: CARB 2025a.

Table 3.3-10 Number of Days Above the NAAQS 24-Hour Standard for PM_{10}

Monitoring Sites	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023[1]
El Dorado County												
South Lake Tahoe-Sandy Way	*	*	*	0	0	0	0	0	3.0	*	0	0
Placer County												
Roseville-N Sunrise Blvd	0	0	0	*	0	0	2	0	5.3	1.1	0	0
Sacramento County												
North Highlands-Blackfoot Way	0	0	0	*	0	0	12.3	*	5.8	0	*	*
Sacramento-Branch Center Rd #2	0	0	0	0	0	0	6.1	*	7.7	0	0	0
Sacramento-Del Paso Manor	0	0	0	0	0	0	12.3	*	6.1	*	0	0
Sacramento-Goldenland Court	*	*	0	0	0	*	*	*	*	*	*	*
Sacramento-Health Dept.- Stockton Blvd.	*	0	0	0	*	*	*	*	*	*	*	*
Sacramento-T Street	0	*	0	0	0	0	6	1.0	4.0	0	0	0
Sutter County												
Yuba City-Almond Street	0	0	*	0	0	0	8	0	4.0	0	0	0
Yolo County												
West Sacramento-15th Street	0	0	0	0	0	0	12.3	0	*	0	0	0
Woodland-Gibson Road	0	0	0	0	0	0	6.1	0	*	0	0	0

Note: *There was insufficient (or no) data available to determine the value. Estimated days mathematically estimates how many days concentrations would have been greater than the level of the standard had each day been monitored, which can result in fractions of a day.

[1] 2023 is the most recent year of data available.

Source: CARB 2025a.

Table 3.3-11 Number of Days Above the CAAQS 24-Hour Standard for PM_{10}

Monitoring Sites	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023[1]
El Dorado County												
South Lake Tahoe-Sandy Way	*	*	2.0	*	0	*	*	*	13.0	*	*	*
Placer County												
Rocklin-Rocklin Road	*	*	*	*	*	*	*	*	*	*	*	*
Colfax – City Hall	0	12.2	6.5	*	*	*	*	*	*	*	*	*
Lincoln – L Street	*	*	*	*	*	*	*	*	*	*	*	*
Auburn-Dewitt-C Avenue	0	6.5	6.1	*	*	*	*	*	*	*	*	*
Roseville-N Sunrise Blvd	0	*	0	*	*	*	*	2.0	38.0	11.0	4.0	0
Sacramento County												
North Highlands-Blackfoot Way	0	0	*	*	0	18.8	12.2	*	46.7	6.1	*	*
Sacramento-3801 Airport Road	*	*	*	*	0	*	*	*	*	*	*	*
Sacramento-Branch Center Rd #2	17.8	6.1	0	0	0	18.4	24.1	*	*	25.4	6.0	0
Sacramento-Del Paso Manor	0	12.3	0	0	0	18.6	12.2	*	*	*	0	0
Sacramento-Goldenland Court	0	6.0	0	6.1	0	*	*	*	*	*	*	*
Sacramento-Health Dept.-Stockton Blvd.	0	0	0	0	*	*	*		*	*	*	*
Sacramento- T Street	0	*	*	*	*	*	22.2	24.5	59.0	13.3	6.1	*
Sutter County												
Yuba City-Almond Street	6.1	*	*	6	1	19.3	*	27.0	40.3	*	9.1	*
Yolo County												
West Sacramento-15th Street	6.5	23.0	0	6.1	0	*	12.2	0	*	5.7	12.1	6.1
Woodland-Gibson Road	6.1	23.3	0	12.2	12.2	18.4	24.5	*	*	24.1	12.2	13.1

Note: *There was insufficient (or no) data available to determine the value. Estimated days mathematically estimates how many days concentrations would have been greater than the level of the standard had each day been monitored, which can result in fractions of a day.

[1] 2023 is the most recent year of data available.

Source: CARB 2025a.

$PM_{2.5}$

EPA changed the 24-hour standard for $PM_{2.5}$ from 65 µg/m^3 to 35µg/m^3 in 2006, and two areas within the plan area were consequently designated as $PM_{2.5}$ nonattainment areas in 2009. Since the new standards were implemented, EPA approved the *Yuba City-Marysville $PM_{2.5}$ Nonattainment Area Redesignation Request and Maintenance Plan* on December 9, 2014. The area is now designated attainment, effective January 8, 2015. Until 2017, Sacramento County was in nonattainment for the standard. Moderate Nonattainment Area - Sacramento Area (Sacramento and portions of Yolo, Solano, Placer and El Dorado Counties). Maintenance Area -Yuba City-Marysville Area (Sutter and a portion of Yuba County). The second $PM_{2.5}$ Maintenance Plan has been approved by CARB and is still pending action by the EPA.

Of the six counties which comprise the plan area, Sutter County and Yuba County are designated as nonattainment for the $PM_{2.5}$ CAAQS. The four remaining counties are either in attainment or unclassified for the $PM_{2.5}$ CAAQS.

Table 3.3-12 shows the average number of days that the NAAQS for $PM_{2.5}$ was exceeded from 2012 through 2023, the last year for which data are currently available.

CO

The area monitored for CO levels was redesignated as a maintenance area in the *1996 Carbon Monoxide Maintenance Plan for 10 Federal Planning Areas* prepared by CARB. The maintenance area for CO includes the urbanized portions of Placer, Yolo, and Sacramento counties. The area has reduced emissions to acceptable amounts in accordance with the proposed budget of CO emissions as included in the *2004 Amendment to the California State Implementation Plan for Carbon Monoxide*. CO is no longer an analyzed pollutant as of June 1, 2018 when the 20-year conformity obligation period ended (EPA 2012).

AIR POLLUTION MONITORING

CARB maintains air quality monitoring stations throughout the state in conjunction with local air districts. Data collected at these stations are used by CARB to classify air basins as attainment or nonattainment for both the NAAQS and CAAQS with respect to each criteria pollutant, and to monitor progress in attaining the NAAQS and CAAQS.

Table 3.3-13 lists the currently operating (as of May 2025) and retired air quality monitoring sites within the plan area, which reported data from 2012 to 2023.

Table 3.3-12 Number of Days Above NAAQS 24-Hour Standard for $PM_{2.5}$

Monitoring Sites	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Placer County												
Auburn-11645 Atwood Road	2.0	7.2	4	1	0	0	11.6	0	27.3	12.1	8.0	0
Roseville-N Sunrise Blvd	0	0	0	0	0	0	17.3	0	19.7	10.3	1.0	0
Sacramento County												
Folsom-Natoma Street	*	*	0	1.1	0	0	9	*	*	10.0	2.0	0
Sacramento-Bercut Drive	*	*	*	*	*	5.9	6.8	0	*	6.6	1.0	2.2
Sacramento - Del Paso Manor	0	13.0	0	8.7	3.3	6.2	10.6	3.0	28.1	5.0	10.3	0
Sacramento-Health Dept.-Stockton Blvd.	0	10.2	0	3.5	*	*	*	*	*	*	*	*
Sacramento-T Street	0	6.1	0	3	0	6.1	*	0	17.1	4.0	0	1.0
Sloughhouse	*	*	*	*	*	*	11.6	0	20.1	*	0	0
Sutter County												
Yuba City-Almond Street	1.0	0	*	1.1	1	2.4	8.4	2.0	31.2	11.1	2.0	0
Yolo County												
Woodland-Gibson Road	0	0	0	0	0	12.3	12.3	*	*	0	0	1.1

Note: *There was insufficient (or no) data available to determine the value. Estimated days mathematically estimates how many days concentrations would have been greater than the level of the standard had each day been monitored, which can result in fractions of a day.

Source: CARB 2025a.

Table 3.3-13 Open and Closed Air Quality Monitoring Sites in the Plan Area

Monitoring Sites	Operating Agency	Address	Status
El Dorado County			
Cool - Highway 193 (seasonal)	CARB	1400 American River Trail	Open
Echo Summit (seasonal)	CARB	U.S. 50 Echo Summit	Open
Placerville - Gold Nugget Way (seasonal)	CARB	3111 Gold Nugget Way	Open
Placer County			
Auburn - Dewitt-C Avenue	PCAPCD	11484 B Ave DeWitt Cen.	Closed
Auburn - Atwood Rd	PCAPCD	11645 Atwood Rd.	Open
Colfax - City Hall	PCAPCD	10 West Church Street	Open
Lincoln - 1445 1st St.	PCAPCD	1445 1st St.	Closed
Lincoln - 204 L St.	PCAPCD	204 L St.	Closed
Lincoln - 2885 Moore Road	PCAPCD	2885 Moore Road	Open
Roseville Railyard - Denio	PCAPCD	Shed 600 feet from Atkins Ave.	Closed
Roseville Railyard - Pool	PCAPCD	311 Vernon St	Closed
Roseville Railyard - Vernon	PCAPCD	Alley north of Vernon St	Closed
Roseville - N Sunrise Blvd	CARB	151 North Sunrise	Open
Sacramento County			
Elk Grove - Bruceville Road	SMAQMD	12490 Bruceville Road	Open
Folsom - Natoma Street	SMAQMD	15 Natoma Street	Open
North Highlands - Blackfoot Way	SMAQMD	7823 Blackfoot Way	Open
Sacramento - 3801 Airport Road	SMAQMD	3801 Airport Road	Closed
Sacramento - Bercut Drive	SMAQMD	100 Bercut Drive	Open
Sacramento - Branch Center #2	SMAQMD	3847 Branch Center Rd.	Open
Sacramento - Del Paso Manor	SMAQMD	2701 Avalon Street	Open
Sacramento - El Camino	SMAQMD	El Camino & Watt Ave	Closed
Sacramento - Goldenland Court	SMAQMD	68 Goldenland Ct	Closed
Sacramento - Health Department	SMAQMD	2221 Stockton Blvd.	Closed
Sacramento - T Street	CARB	1309 T Street	Open
Sloughhouse	SMAQMD	7520 Sloughhouse Road	Open
Sutter County			
Sutter Buttes (seasonal)	CARB	Top of South Butte	Open
Yuba City - Almond Street	CARB	773 Almond St	Open
Yolo County			
Davis - UCD Campus	CARB	U.C. Davis Ag. Station, Campbell Rd	Open
West Sacramento - 15th Street	YSAQMD	132 W. 15th St	Open
Woodland - Gibson Road	YSAQMD	17 W. Main Street	Open

Notes: CARB- California Air Resources Board, PCAPCD-Placer County Air Pollution Control District, SMAQMD- Sacramento Metropolitan Air Quality Management District, YSAQMD- Yolo Solano Air Quality Management District, EDCAQMD- El Dorado County Air Quality Management District

Source: CARB 2025b.

SOURCES OF AIR POLLUTION

Release of air pollutants comes from almost all human activities, including industrial facilities, dry cleaners, automobiles, auto body shops, trucks, trains, lawn mowers, bakeries, farm equipment, paints, paving, printing, airplanes, construction equipment, refining, and agricultural activities. Some sources emit large amounts of the pollutants that cause ozone (e.g., NO_X), but only small amounts of CO or PM, while others emit large amounts of all three.

Emissions are normally grouped into four main categories: stationary, area-wide, mobile, and natural sources, as described below. Generally, stationary- and area-wide sources are those attached to the ground, while mobile sources, as the name implies, are those involved in the movement of people and goods. Natural emission sources refer to emissions that are non-anthropogenic (i.e., not human-caused) sources.

Stationary Emission Sources

Stationary source emissions, also referred to as point-source emissions, are emissions from major industrial, manufacturing, and processing plants. This category also includes emissions from electric utilities; waste burning; solvent use; petroleum processing, storage, and transfer; and industrial processes.

Area-wide Emission Sources

Area-wide sources are those that individually emit small quantities but collectively result in substantial emissions when aggregated over a larger area. Emissions result from landscaping; natural gas consumption; small industrial engines; solvent use in dry cleaning; auto repair, auto body, and paint; wood burning; industrial coatings; consumer products; printing; bakeries and restaurants; asphalt paving; and fugitive dust.

Mobile Emission Sources

There are two major categories under mobile emissions:

- *On-Road Mobile Sources:* This major source category accounts for the emissions from all types of vehicles licensed to travel on public roads and highways. This includes passenger cars, light- and medium-duty trucks, heavy-duty gas and diesel trucks, heavy-duty urban diesel buses, and motorcycles.
- *Off-Road Mobile Sources*: This major category accounts for vehicular emissions from construction equipment, farm tractors, off-road recreational vehicles, trains, ships, aircraft, mobile equipment, utility equipment, and lawn mowers.

Natural Emissions Sources

Some air pollutant emissions are non-anthropogenic and occur due to a variety of natural factors in the environment. For example, PM emissions can result from natural events such as wind-raised dust, dust from landslides, and air pollutants related to wildfires. As identified above, there is also NOA in the plan area, which is most commonly found in serpentine soils and rocks and can become a source of emissions when released into the air.

SENSITIVE RECEPTORS

Sensitive receptors generally include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the elderly. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and/or the potential for increased and prolonged exposure to pollutants. Existing sensitive receptors are scattered through the plan area.

CONSTRUCTION-RELATED EMISSIONS

Construction-related emissions are produced by two main sources: construction equipment and fugitive dust generated by excavation and grading. Construction impacts are an on-going source of emissions within the SVAB and MCAB. SMAQMD adopted the 2015 Triennial Report and Air Quality Plan Revision with the goal of an estimated 0.27 ton per day reduction in NO_X from the Construction and Mining Sector in Sacramento County (SMAQMD 2015).

Emissions of ozone precursors are associated primarily with exhaust from off-road construction equipment. Worker commute trips and other construction-related activities also contribute to short-term increases in ozone precursors. Emissions of fugitive PM dust (i.e., PM_{10} and $PM_{2.5}$) are associated primarily with ground disturbance activities during site preparation (e.g., excavation, grading, and clearing) and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and VMT on- and off-site. Exhaust emissions from diesel equipment and worker commute trips also contribute to short-term increases in PM_{10} and diesel PM.

3.3.3 Environmental Analysis

METHODOLOGY

Generally, with respect to air quality impacts, a change from existing conditions could prove to be beneficial if vehicle and/or heavy equipment idling time is reduced, a project results in a transportation mode shift, or clean technology is used. However, a change from existing conditions may result in a negative impact if a project results in increased levels of congestion due to increased idling times, a decrease in transit ridership, or an increase in local truck traffic. Therefore, the general approach in this impact analysis is to determine how implementation of the 2025 Blueprint would change the air quality environment from existing conditions, and whether that change would have a positive or negative effect on the region. The analysis uses an existing conditions baseline. Data used to define existing conditions are the most accurate available, and includes data from 2020, prior to onset of the COVID-19 pandemic.

For the NAAQS, projecting the future air quality environment, and how well the 2025 Blueprint fits within existing air quality plans and their projected maintenance or attainment strategies, can be evaluated through an existing federal process. Conformity is established under the CAA to ensure that transportation planning, transportation improvement programs, and projects are consistent with plans to achieve and maintain NAAQS.

To meet its conformity requirements, SACOG estimates emissions using the most recent population, employment, travel, and congestion forecasts, using 2020 as the baseline. Through the SACSIM19 model, estimated daily VMT and trips were generated for the baseline year of 2020 and the 2025 Blueprint horizon year of 2050. The emissions of criteria air pollutants were then modeled using CARB's On-Road Emissions Factor (EMFAC) 2021 model. The EMFAC model represents CARB's most up-to-date understanding of motor vehicle activities and their associated emissions levels and is subject to periodic update. Daily VMT and total trips from each milestone year are used as inputs to the vehicle-emissions forecasting model to develop emission forecasts. A determination of conformity, or conformance with the SIP, is realized when the forecasted emissions are within budgets identified in the SIP or pass the interim emissions test.

For the CAAQS, the evaluation is based on consistency with the parameters used by the local air districts in their planning processes. As noted above in Section 3.3.1 "Regulatory Setting," the CCAA requires air districts to endeavor to attain and maintain the CAAQS by the earliest practicable date and develop plans for attaining the CAAQS. Air districts develop SIPs to demonstrate a path toward attainment and in those SIPs, emissions budgets and reductions are identified.

For long-term operational emissions of criteria air pollutants, the California Emissions Estimator Model, Version 2022.1.1.29, computer program (CalEEMod) was used to calculate the regional emissions of ROG, NO_X, CO, PM_{10}, and $PM_{2.5}$ associated with the implementation of the 2025 Blueprint. CalEEMod was used to estimate criteria pollutant emissions from mobile sources, area sources such as landscaping and maintenance activities, and energy sources.

The results of the CalEEMod modeling were compared with local air district thresholds, which are developed in consideration of SIPs and attainment status under the NAAQS and CAAQS. Long-term stationary-source emissions were qualitatively assessed in accordance with air district-recommended methodologies that rely on compliance with associated rules and regulations (e.g., permitting process) for which compliance is required by law. Modeled long-term operational emissions were compared with applicable air district thresholds for determination of significance.

Long-term exposure of sensitive receptors to operational emissions of TACs were assessed qualitatively using a number of tools and publications. The analysis examines the guidance contained in the CARB Handbook, which includes recommendations for the siting of sensitive receptors near uses associated with TACs, such as freeways and high-traffic roads, commercial distribution centers, dry cleaners, gasoline stations, and industrial facilities (CARB 2005). The analysis of health risk exposure also explores the SMAQMD's MSAT Protocol and the OEHHA Guidance Manual. Although this impact analysis is addressed qualitatively, the guidance parameters provided by these sources is acknowledged. Ultimately, the impact conclusion is based on whether the project would develop sensitive receptors in locations where they would be exposed to substantial levels of TAC-related health risk. Other important facets to this analysis are how the estimated health risk exposure levels at proposed sensitive receptors compare to baseline risk levels in the plan area, and the necessity to disclose an accurate understanding of the potential risk levels so they can be considered in the planning process. Health risk associated with airport-generated emissions of TACs is also discussed qualitatively based on the limited and recent research on the topic. A discussion of TAC risks for receptors located near freeways and major roadways is also provided.

Long-term stationary-source emissions were qualitatively assessed in accordance with air district-recommended methodologies that rely on compliance with associated rules and regulations (e.g., permitting process) for which compliance is required by law. It is important to note that the MSAT Protocol focuses on assessing cancer risk from diesel PM, due to its greater cancer risk from exposure from roadways when compared to the other mobile source air toxics. However, the SMAQMD MSAT Protocol addresses other MSATs as well.

Construction-related emissions of criteria air pollutants (e.g., $PM_{2.5}$ and PM_{10}) and precursors (ROG and NO_X) were assessed qualitatively, as specific construction details are not available at this programmatic level. This assessment was based on general information provided in the project description and typical construction practices for the proposed land use types and transportation projects in regard to a potential exceedance of applicable thresholds of significance. Similarly, project-generated, construction-related emissions of TACs were assessed qualitatively as specific construction details are not available at this programmatic level. Finally, odors were assessed qualitatively in regard to the potential for the 2025 Blueprint to result in the exposure of sensitive receptors to objectionable odors.

See Appendix B for additional information regarding methodology, calculations, and assumptions.

THRESHOLDS OF SIGNIFICANCE

For the purposes of this Draft EIR, the 2025 Blueprint would result in significant impacts to air quality if it would:

- Conflict with or obstruct implementation of an applicable air quality plan;
- Be inconsistent with or exceed applicable thresholds of significance established by the local air district for short-term construction criteria air pollutant emissions or long-term operational criteria air pollutant emissions;
- Expose sensitive receptors to substantial TAC concentrations, including those from construction and operational emissions;
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people; and/or
- Be inconsistent with or exceed applicable thresholds of significance established by the local air district for short-term construction criteria air pollutant emissions or long-term operational criteria air pollutant emissions.

ISSUES NOT DISCUSSED FURTHER

All of the topics identified in the significance criteria above are addressed in the following analysis.

IMPACTS AND MITIGATION MEASURES

Impact 3.3-1: Conflict With or Obstruct Implementation of an Applicable Air Quality Plan

The following discussion presents the impacts associated with buildout of the 2025 Blueprint (i.e., the totality of all future regional growth, land use change, and transportation network improvement projects under the 2025 Blueprint) and is essentially a cumulative analysis of the 2025 Blueprint. Due to the inherently cumulative nature of air quality impacts (excluding the localized nature of odor and TAC impacts), the analysis below evaluates air quality impacts based on the collective construction and operational emissions from all future regional growth, land use change, and transportation network improvement projects under the 2025 Blueprint.

Regional Growth and Land Use Change/Transportation Network Improvements and Programs

Applicable air quality plans that may be affected by the 2025 Blueprint are as follows: 2004 Amendment to the California SIP for CO, the federal maintenance plan for CO, the 2023 Sacramento Regional Plan for the 2015 70 ppb 8-Hour Ozone Standard, the 2022 State SIP Strategy and the corresponding State SIPs, the PM_{10} Implementation/Maintenance Plan and Redesignation Request for Sacramento County (October 28, 2010), the federal maintenance plan for PM_{10}, and all other local air district plans prepared in compliance with the CCAA to attain and maintain the CAAQS. The relationship between the federal Transportation Conformity Rule and local air district attainment and maintenance plans, budgets, and the associated fulfillment of attaining and maintaining the NAAQS and CAAQS, is discussed above. The 2025 Blueprint would have a significant air quality impact if the projected emissions of nonattainment and maintenance air pollutants would conflict with, or obstruct, implementation of any of the aforementioned plans.

In general, projecting the future air quality environment and how well the 2025 Blueprint fits within existing air quality attainment plans, and their projected maintenance or attainment strategies, is evaluated through existing federal, State, and local air district processes. A determination of conformity, or conformance with the plans, is realized when: the forecasted emissions are within budgets identified in the plans or pass the interim emissions test, the latest planning assumptions and emission models are used, the plan and program are financially constrained, and the timely implementation of transportation control measures can be demonstrated. Determining conformity involves analyzing the impacts of land use and transportation in combination at the regional level. It includes quantitatively measuring how selected land use and transportation planning principles in combination would affect the future air quality environment. As established in the 2025 Blueprint, behavioral changes in choice of travel directly impact mobile source emission generation projections, and reduced VMT and trip numbers result in lower emissions.

As described above, the CAA requires that federally funded or approved transportation plans, programs, and projects in nonattainment or maintenance areas conform to the SIP for meeting the NAAQS. Conformity must be assessed for all nonattainment area transportation-related pollutants classified as regional pollutants. The 2025 Blueprint was analyzed for conformity according to the process described in the "Methodology" section. Because this analysis provides the foundation for determining if the 2025 Blueprint conflicts with or obstructs implementation of an applicable air quality plan (specifically in regard to the NAAQS), the conformity analysis prepared for the 2025 Blueprint and appended to the plan as Appendix H is incorporated into this Draft EIR by reference.

Ozone: The conformity analysis determined that implementation of the 2025 Blueprint and 2025 Metropolitan Transportation Improvement Program (MTIP) Amendment #11 would result in less total regional on-road vehicle-related emissions (ROG and NO_x) than the emissions budget found adequate by EPA in the *2018 Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment Plan and Reasonable Further Progress Plan*, and the Sacramento Metro Area portion of the Sacramento Metro Area portion of the *2018 Updates to the California State Implementation Plan*. This analysis has used these budgets for demonstration of the 2008 and 2015 standards.

PM_{10}: The conformity analysis determined that implementation of the 2025 Blueprint and 2025 MTIP Amendment #11 would result in less total regional on-road vehicle-related emissions than the emissions budget found adequate by EPA in the 2010 PM_{10} Implementation/Maintenance Plan and Re-designation Request for Sacramento County. EPA approved the *Second 10-Year Maintenance plan for the 24-Hour PM_{10} Standards; Sacramento County planning Area,* on March 14, 2024, effective April 15, 2024 (40 CFR Part 52).

$PM_{2.5}$: The conformity analysis determined that the total regional on-road, vehicle-related emissions associated with implementation of the 2025 Blueprint and 2025 MTIP Amendment #11 for the analysis years are projected to be less than or equal to the emissions for the Baseline scenario, satisfying the test established in Interim Transportation Conformity Guidance for 2006 $PM_{2.5}$ NAAQS Nonattainment Areas in the Sacramento area. The analysis also found that implementation of the 2025 Blueprint and 2025 MTIP Amendment #11 would result in less total regional on-road vehicle-related emissions than the emissions budgets found adequate by EPA in the *2014 Yuba City-Marysville $PM_{2.5}$ Maintenance Plan and Re-designation Request*.

The forecasted emissions for ozone and PM_{10} associated with the 2025 Blueprint are within the conformity budgets identified within the existing plans for each milestone year. The forecasted emissions for $PM_{2.5}$ associated with the 2025 Blueprint pass all interim emissions tests for all milestone years. Achieving conformity provides the link between air quality and land use/transportation planning by linking the SIP and the 2025 Blueprint. More prescriptively, the SIPs in the plan area provide the strategies that would be used to attain and maintain the NAAQS. Through conformity, the 2025 Blueprint demonstrates that the region's land use and transportation system implement this strategy.

For the CAAQS, the evaluation is based on consistency with the parameters used by the local air districts in their planning processes. As noted above in Section 3.3-1, "Regulatory Setting," the CCAA requires air districts to endeavor to attain and maintain the CAAQS by the earliest practicable date and develop plans for the CAAQS. The 2025 Blueprint accommodates the expected population growth and accompanying demand for transportation in the region through a multi-modal approach. The local air districts report actual progress toward meeting CAAQS by reporting recent historic trends in exceedances of CAAQS through their district monitoring programs. The 2025 Blueprint supports continued reduction in air pollutant emissions from on-road mobile sources. The local air districts also report progress in implementing specific programs intended to reduce criteria emissions from on-road sources. The 2025 Blueprint does not conflict with local air district programs and includes programs and strategies that complement and support the local air district programs. Thus, the 2025 Blueprint continues to facilitate local air quality planning efforts as part of the implementation of the applicable air quality plans.

The 2025 Blueprint accommodates the expected population growth and accompanying demand for transportation in the region through a multi-modal approach. The 2025 Blueprint supports continued reduction in criteria air pollutant emissions from on-road mobile sources. The local air districts also report progress in implementing specific programs intended to reduce criteria emissions from on-road sources. The 2025 Blueprint does not conflict with local air district programs and includes programs and strategies that complement and support the local air district programs. Thus, the 2025 Blueprint continues to facilitate local air quality planning efforts as part of the implementation of the applicable air quality plans.

As a result, the 2025 Blueprint would not conflict with or obstruct the implementation of any applicable air quality plan for CAAQS or NAAQS. The combined impacts related to the projected land use pattern and planned transportation improvements from implementation of the 2025 Blueprint at the regional level would be **less than significant.**

Summary

This impact would be **less than significant**.

Mitigation Measures

No mitigation would be required.

Impact 3.3-2: Be Inconsistent with Or Exceed Applicable Thresholds of Significance Established by The Local Air District for Long-Term Operational Criteria Air Pollutant Emissions and Short-Term Construction Criteria Air Pollutant Emissions

The following discussion presents the impacts associated with buildout of the 2025 Blueprint (i.e., the totality of all future regional growth, land use change, and transportation network improvement projects under the 2025 Blueprint) and is essentially a cumulative analysis of the 2025 Blueprint. Due to the inherently cumulative nature of air quality impacts (excluding the localized nature of odor and TAC impacts), the analysis below evaluates air quality impacts based on the collective construction and operational emissions from all future regional growth, land use change, and transportation network improvement projects under the 2025 Blueprint.

Regional Growth and Land Use Change/Transportation Network Improvements and Programs

Construction

Due to the regional scale of the 2025 Blueprint and the programmatic level of this analysis, specific construction-related details (e.g., location, schedule, equipment) for individual land use development projects are not available. Thus, construction-related emissions of air pollutants serve only as an approximation of the emissions that could result from the Development Pattern identified in the 2025 Blueprint. A qualitative analysis is provided below as construction of the 2025 Blueprint would generate temporary criteria pollutant emissions primarily due to the operation of construction equipment and truck trips.

Implementation of the 2025 Blueprint would result in the construction of new land use developments and transportation infrastructure improvements that could result in air quality impacts from grading, paving, clearing, landscaping, staging, excavation, earthmoving, and other related construction activities. As stated above, these activities would result in emissions from the use of construction equipment such as dozers, loaders, excavators, forklifts, cranes, backhoes, and paving equipment, as well as haul trips and employee commute trips. Construction-related activities associated with the implementation of the project would generate emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ associated with the operations of off-road equipment, material delivery trips, worker commute trips, and other miscellaneous activities (e.g., application of architectural coatings). Fugitive dust emissions of PM_{10} and $PM_{2.5}$ would be associated primarily with vehicle movement and would vary as a function of soil silt content, soil moisture, wind speed, and acreage of disturbance. PM_{10} and $PM_{2.5}$ are also contained in exhaust from off-road equipment and on-road vehicles. Emissions of the ozone precursors ROG and NO_X would be associated primarily with construction equipment and on-road mobile exhaust. The application of architectural coatings results in off-gas emissions of ROG. However, due to the regional scale of the 2025 Blueprint and the programmatic level of this analysis, specific construction-related details (e.g., location, schedule, equipment) for individual land use development projects are not available. Thus, the precise quantity of emissions would need to be determined at the time of the construction of a given land use development project. Further, although an individual improvement project may not generate significant short-term emissions, several projects could be under construction simultaneously, generating combined construction emissions that impact air quality. While construction impacts are considered temporary and localized in nature, as they are limited to the time during which the project is being constructed and confined to areas adjacent to the construction site, there remains the potential for the projected land use patterns and proposed transportation infrastructure improvement projects under the 2025 Blueprint to result in construction-related impacts that increase air pollutant concentration levels such that pollutant concentrations would exceed local air districts' thresholds.

Operations

Implementation of the 2025 Blueprint would result in long-term operational (regional) emissions of ROG, NO_X, SO_X, CO, $PM_{2.5}$, and PM_{10} associated with mobile sources, area sources (e.g., natural gas emissions, landscaping, applications of architectural coatings, and use of consumer products), and emissions from the generation and consumption of electricity and natural gas.

Long-term operational emissions are a function of a variety of parameters, including project type, size, density/intensity, location, and design (including energy efficiency features). The 2025 Blueprint outlines projected land use patterns that serve as a guide—not a definitive prescription—for future development in the region. The development standards within these patterns are set by individual jurisdictions and local reviewing bodies. Whether or not individual projects would result in substantial operational emissions would depend on the previously listed parameters, most of which are not known at this time and therefore cannot be quantified on an individual basis. Similarly, specific details regarding transportation improvement projects under the 2025 Blueprint such as road safety improvements, roadway lane additions, pedestrian and biking infrastructure additions and improvements, and bridge additions/improvements are not fully designed at this level of analysis and operational emissions cannot be quantified on an individual basis. However, regional changes in emissions from 2020 to 2050, including implementation of the 2025 Blueprint, have been estimated for informational purposes. Specifically, Table 3.3-14 summarizes the net change in operational criteria air pollutants between 2020 and 2050 of the entire region (including implementation of the 2025 Blueprint) based on standard development typical of the region.

Table 3.3-14 Net Change in Emissions in the Plan Area 2020-2050 (lb/day)

Source	ROG	NO_X	CO	SO_X	PM_{10} Exhaust	PM_{10} Dust	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Dust
2020								
Mobile	34,740	68,388	275,643	605	884	41,674	836	10,637
Energy	887	15,752	10,822	97	1,225	0	1,225	0
Hearths	104,510	3,180	167,604	332	23,038	0	22,717	0
Consumer Products	53,041	0	0	0	0	0	0	0
Architectural Coatings	4,637	0	0	0	0	0	0	0
Total	**197,814**	**87,320**	**454,069**	**1,033**	**25,147**	**41,674**	**24,779**	**10,637**
2050								
Mobile	12,844	20,826	114,602	451	283	48,122	268	12,254
Energy	974	17,346	12,175	106	1,346	0	1,346	0
Hearths	127,100	3,867	203,831	404	28,018	0	27,627	0
Consumer Products	63,687	0	0	0	0	0	0	0
Architectural Coatings	5,578	0	0	0	0	0	0	0
Total	**210,183**	**42,040**	**330,607**	**961**	**29,648**	**48,122**	**29,242**	**12,254**
Change in Emissions From 2020 to 2050								
Mobile	-21,896	-47,562	-161,041	-154	-600	6,448	-568	1,617
Energy	88	1,594	1,352	10	121	0	121	0
Hearths	22,590	687	36,227	72	4,980	0	4,910	0
Consumer Products	10,646	0	0	0	0	0	0	0
Architectural Coatings	941	0	0	0	0	0	0	0
Total Change in Emissions	**12,369**	**-45,280**	**-123,461**	**-72**	**4,500**	**6,448**	**4,463**	**1,617**

Notes: ROG = reactive organic gases; NO_X = oxides of nitrogen; CO = carbon monoxide; SO_X = oxides of sulfur; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter.

Source: Modeling performed by Ascent in 2025. Modeld values may vary from the 2025 Blueprint due to differences in modeling methodology.

As shown in Table 3.3-14, regional transportation-related emissions in 2050 are forecast to decline relative to the 2020 Baseline for ROG, NO_X, SO_X, CO, exhaust $PM_{2.5}$, and exhaust PM_{10} despite projected future growth in VMT. Notably, mobile-source emissions reductions would occur even in a "no-project" scenario where the 2025 Blueprint is not implemented, as statewide mobile source emissions are currently trending downward due to CARB rules designed to reduce emissions from cars and trucks. The 2025 Blueprint would support statewide mobile-source emissions reductions, however, and serve the purpose of supporting the region's goals of attaining and maintaining the NAAQS and CAAQS. Note that the VMT values used for the emissions analysis above do not account for the VMT benefits (reductions) associated with non-motorized projects such as infill development projects which reduce VMT by increasing development density. These projects would further reduce VMT and associated emissions below the values shown herein. Although other sectors (e.g., energy, architectural coatings) are also anticipated to experience per-capita reductions in emissions due to the regulatory environment, Table 3.3-14 reports an increase in total emissions from these sources that is attributable to the projected increase in population.

Overall, considering all emissions sources, emissions of ROG, NO_x, CO, and SO_x would decrease. In contrast, both dust and exhaust emissions of PM_{10} and $PM_{2.5}$ would increase overall. Notably mobile-source dust PM is forecast to increase, due primarily to re-entrained road dust due to the increase in VMT.

As mentioned above, this modeling is general in nature and is meant to provide information about the magnitude of increased operational emissions that could occur in the region from 2020 to 2025, including implementation of the 2025 Blueprint. It is important to note that as the 2025 Blueprint is implemented, project-level analysis of area sources would be required as appropriate by the CEQA lead agency. Because of the programmatic nature of the 2025 Blueprint, individual projects and associated emissions may be different than what is projected at the plan level and may exceed applicable mass emissions thresholds set by the applicable air district, as such thresholds were developed to be applied to project-level emissions. Operational emissions from development would be evaluated prior to project-level approval to ensure proper CEQA clearance and implementation of applicable reduction controls and/or mitigation measures.

With respect to stationary source emissions, levels can vary greatly depending on the exact operations and processes involved. Stationary sources of pollutants would be required to obtain permits to operate in compliance with local air district rules. These sources could include: diesel engine or gas turbine generators for emergency power generation; central heating boilers for commercial, industrial, or large residential buildings; process equipment for light industrial uses; kitchen equipment at restaurants and schools; service station equipment; and dry-cleaning equipment. Specific information is not available for this program level analysis to reliably estimate these emissions. The permit process would ensure that these sources would be equipped with required emission controls. Nonetheless, the emissions from these sources would be additive to the estimated area source emissions described above.

As stated previously, Table 3.3-14 provides a summary of overall regional emissions in 2020 and the 2050 project horizon year. Thus, this analysis intends to convey the total regional emissions reductions in the scenario that the 2025 Blueprint is implemented and the emissions reduction estimates are provided for informational purposes only. It is unknown at the time of writing this Draft EIR which individual land use projects associated with implementation of the 2025 Blueprint would exceed or not exceed any air district's project-level emissions thresholds for long-term operational criteria air pollutant emissions.

As described in Section 3.3.1, "Regulatory Setting," the 2025 Blueprint is best evaluated for air quality impacts at the plan level. This is because project-level thresholds, such as project-level numerical construction and operational pollutant thresholds, are intended for evaluation of individual land use development projects. However, not all elements of an air district's plan-level guidance may apply to the project. The example provided in Section 3.3.1, above, elaborates on this using the example of SMAQMD's recommendation that projects require emissions reductions through implementation of an AQMP. In this example, because implementation of an AQMP requires plan-level policies to be implemented by developers during the planning stage, this guidance would not be applicable to a regional transportation plan such as the 2025 Blueprint, but to a more localized plan such a specific plan. Because construction and operation of individual projects under the 2025 Blueprint would occur on a regional scale within multiple air districts, this analysis considers the potential for individual projects under the 2025 Blueprint to exceed project-level thresholds.

As discussed previously under "Methodology," determining the exact location of where such impacts would occur from project-level emissions is infeasible as part of this programmatic Draft EIR. Additionally, the specific timing, size, and land use that may characterize a project that exceeds an applicable mass emission threshold is unknown at the time of writing this Draft EIR. Thus, it is not possible to map or locate where human health impacts may occur. However, this Draft EIR takes a conservative approach and assumes that some land uses would exceed an applied project-level threshold of significance related to exposure to emissions and could cause adverse health outcomes. Notably, future development projects under the 2025 Blueprint would undergo project-level analyses in accordance with local air district guidance to determine air quality impacts from construction and operational activities.

Summary

As stated above, although any individual projects under the 2025 Blueprint may not generate significant short-term emissions, it is probable that several projects would be under construction simultaneously, generating combined construction emissions that could impact air quality. Regarding long-term operational emissions, at the regional level, there is the potential for the 2025 Blueprint to be inconsistent with, or exceed, applicable thresholds of significance established by the local air district for long-term operational criteria air pollutant emissions. For these reasons, impacts would be **significant**.

Mitigation Measures

SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following measures or other comparable measures identified by the lead agency at a project-level would reduce impacts related to criteria pollutant emissions and agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081).

Implement Mitigation Measure 3.16-1: Implement VMT Reduction Strategies

Mitigation Measure 3.3-1: Require Applicable Design Measures

Implementing agencies shall require projects that exceed the long-term operational thresholds to mitigate the air quality impacts to below such thresholds using applicable and feasible mitigation, as defined by the local air district.

Examples of design measures that would reduce criteria pollutant emissions include, but are not limited to:

- use of energy-efficient lighting and process systems (e.g., low-NO_X water heaters and boiler units);
- design streets to maximize pedestrian access to transit stops;
- include bus shelters at transit access points where deemed appropriate by local public transit operator in large residential, commercial, and industrial projects;
- equip residential structures with electric outlets in the front and rear of the structure to facilitate use of electrical lawn and garden equipment;
- provide for, or contribute to, dedication of land for off-site Class I and Class II bicycle facilities linking the project to designated bicycle commuting routes in accordance with the regional bikeway master plan;
- contribute to the provision of synchronized traffic signals on roadways affected by the project and as deemed necessary by the local public works department;
- provide transit-enhancing infrastructure that includes bus turnouts or bulbs, passenger benches, street lighting, route signs and displays, and shelters as demand and service routes warrant, subject to review and approval by local transportation planning agencies;
- provide pedestrian-enhancing infrastructure that includes sidewalks and pedestrian paths, direct pedestrian connections, street trees to shade sidewalks, pedestrian safety designs and infrastructure, street furniture and artwork, street lighting, pedestrian signalization and signage, and/or access between bus service and major transportation points within the project;
- include neighborhood park(s) or other recreational options, such as trails, within the development to minimize vehicle travel to off-site recreational and/or commercial uses;
- install solar water heaters;
- incorporate mixed uses, where permitted by local development regulations, to achieve a balance of commercial, employment, and housing options on the project site;
- contribute to traffic-flow improvements (e.g., right-of-way, capital improvements) that reduce traffic congestion and do not substantially increase roadway capacity;
- provide preferential parking spaces for carpool and vanpool vehicles, implement parking fees for single-occupancy vehicle commuters, and implement parking cash-out program for employees;
- use clean fuel vehicles in the vehicle fleet;
- require all employment centers to include an adequate number of on-site shower/locker facilities for bicycling and pedestrian commuters (typically one shower and three lockers for every 25 employees per shift);
- construct/contribute to bicycle and pedestrian facility improvements;

- provide ancillary services (e.g., cafeterias, health clubs, automatic tellers, and post offices) within walking distance of proposed development (no further than 1,500 feet) as appropriate and in compliance with local development regulations;
- provide park-and-ride lots as deemed feasible and appropriate by transportation planning agencies;
- employment centers that exceed a designated size, as measured by the number of employees, shall provide on-site child care and after-school facilities or contribute to off-site construction of such facilities within walking distance of employment land uses (for employment centers on or adjacent to industrial land uses, on-site child daycare centers shall be provided only if supported by the findings of a comprehensive health risk assessment (HRA) performed in consultation with the local air district);
- provide on-site pedestrian facility enhancements, such as walkways, benches, proper lighting, vending machines, and building access that are physically separated from parking lot traffic;
- offer alternative work schedules, where practical, that allow for work hours that are compressed into fewer than 5 days (e.g., 9/80, 4/40, or 3/36 schedules), or allow flextime schedules;
- provide transit amenities (e.g., on-site and off-site bus turnouts, passenger benches, or shelters) where deemed appropriate by local transportation planning agencies;
- contribute to the provision of synchronized traffic signals on roadways affected by the proposed project and as deemed necessary by the local public works department;
- provide video conferencing facilities;
- commit to support programs that include guaranteed ride home, subsidized transit passes, and rideshare matching;
- provide transportation (e.g., shuttles) to major transit stations and multimodal centers;
- require each employer employment center (more than 25 employees) to assign a transportation coordinator for the applicable Transportation Management Association (TMA);
- require all employers to install a permanent display in employee common areas of alternate transit information, as determined by the requirements of the TMA;
- require employers or employment centers (more than 25 employees) to implement a guaranteed ride home program;
- require employers or employment centers (more than 25 employees) to implement an incentive program for riding transit, carpooling, vanpooling, biking, and walking instead of driving a single-occupancy vehicle to work, and design and locate buildings to facilitate transit access;
- install Energy Star (or equivalent) cool roofing systems on all buildings;
- design shuttle and transit exits to adjoining streets to reduce time to reenter traffic from the project site;
- increase wall and attic insulation to 20 percent above Title 24 requirements (residential and commercial);
- orient buildings to take advantage of solar heating and natural cooling, and use passive solar designs (residential, commercial, and industrial);
- provide energy-efficient windows (double pane and/or Low-E) and awnings or other shading mechanisms for windows, porches, patios, and walkways;
- include passive solar cooling and heating features in designs, as well as ceiling and whole house fans;
- include programmable thermostats in the design of heating and cooling systems; and
- use day lighting systems, such as skylights, light shelves, and interior transom windows.

See also Chapter 3, "Measures to Reduce GHG Emissions," in CAPCOA's *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* (CAPCOA Handbook) for

additional reduction measures (CAPCOA 2024). Although the CAPCOA Handbook focuses on GHG reduction measures, co-benefits of many measures include criteria pollutant emission reductions. Future project proponents shall use the CAPCOA Handbook to develop measures to reduce emissions to below thresholds if significant impacts are identified.

Mitigation Measure 3.3-2: Require Applicable Construction Measures

Lead agencies shall require project applicants, prior to and during construction, to implement construction mitigation measures that, at a minimum, meet the requirements of the applicable air district with jurisdiction over the area in which construction activity would occur if the project is anticipated to exceed thresholds of significance for short-term criteria air pollutant emissions. Projects that exceed these thresholds shall mitigate the air quality impacts using all applicable and feasible mitigation. For construction activity on the project site that is anticipated to exceed thresholds of significance, the project applicant(s) shall require construction contractors to implement both Standard Mitigation Measures and Best Available Mitigation Measures for Construction Activity to reduce emissions for all construction activity performed in the plan area.

Examples of mitigation measures could include, but not limited to, the following:

- The project proponent or their primary contractor shall implement a Fugitive Dust Control Plan.
- All grading operations on a project shall be suspended when winds exceed 20 mph or when winds carry dust beyond the property line despite implementation of all feasible dust control measures.
- Construction sites shall be watered as directed by the local air district and as necessary to prevent fugitive dust violations.
- An operational water truck shall be on-site at all times. Water shall be applied to control dust as needed to prevent visible emissions violations and off-site dust impacts.
- On-site dirt piles or other stockpiled particulate matter shall be covered, wind breaks installed, and water and/or soil stabilizers employed to reduce wind-blown dust emissions. The use of approved nontoxic soil stabilizers shall be incorporated according to manufacturers' specifications to all inactive construction areas.
- All transfer processes involving a free fall of soil or other particulate matter shall be operated in such a manner as to minimize the free fall distance and fugitive dust emissions.
- Approved chemical soil stabilizers shall be applied according to the manufacturers' specifications to all inactive construction areas (previously graded areas that remain inactive for 96 hours), including unpaved roads and employee/equipment parking areas.
- To prevent track-out, wheel washers shall be installed where project vehicles and/or equipment exit onto paved streets from unpaved roads. Vehicles and/or equipment shall be washed before each trip. Alternatively, a gravel bed may be installed as appropriate at vehicle/equipment site exit points to effectively remove soil buildup on tires and tracks and prevent/diminish track-out.
- Paved streets shall be swept frequently (water sweeper with reclaimed water recommended; wet broom permitted) if soil material has been carried onto adjacent paved, public thoroughfares from the project site.
- Temporary traffic control shall be provided as needed during all phases of construction to improve traffic flow, as deemed appropriate by the applicable department of public works and/or California Department of Transportation (Caltrans), and to reduce vehicle dust emissions. An effective measure is to enforce vehicle traffic speeds at or below 15 mph.
- Traffic speeds on all unpaved surfaces shall be reduced to 15 mph or less, and unnecessary vehicle traffic shall be reduced by restricting access. Appropriate training for truck and equipment drivers, on-site enforcement, and signage shall be provided.
- Ground cover shall be reestablished on the construction site as soon as possible and before final occupancy through seeding and watering.

- Open burning shall be prohibited at the project site. No open burning of vegetative waste (natural plant growth wastes) or other legal or illegal burn materials (e.g., trash, demolition debris) may be conducted at the project site. Vegetative waste shall be chipped or delivered to waste-to-energy facilities (permitted biomass facilities), mulched, composted, or used for firewood. It is unlawful to haul waste materials off-site for disposal by open burning.
- The primary contractor shall be responsible for ensuring that all construction equipment is properly tuned and maintained before and for the duration of on-site operation.
- Existing power sources (e.g., power poles) or clean-fuel generators shall be used rather than temporary power generators.
- A traffic plan shall be developed to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. Operations that affect traffic shall be scheduled for off-peak hours. Obstruction of through-traffic lanes shall be minimized. A flag person shall be provided to guide traffic properly and ensure safety at construction sites.
- The project proponent or their primary contractor shall assemble a comprehensive initial inventory (i.e., make, model, engine year, horsepower, emission rates) of all heavy-duty off-road (portable and mobile) equipment (50 horsepower and greater) that would be used an aggregate of 40 or more hours for the construction project and provide a plan for approval by the local air district demonstrating that the heavy-duty (equal to or greater than 50 horsepower) off-road equipment to be used for construction, including owned, leased, and subcontractor vehicles, shall achieve a project-wide fleet-average 10 percent NO_X reduction compared to the most recent CARB fleet average at the time of construction. These equipment emission reductions can be demonstrated using the most recent version of the Construction Mitigation Calculator developed by the SMAQMD. Acceptable options for reducing emissions may include use of late-model engines, low-emission diesel products, alternative fuels, engine retrofit technology (Carl Moyer Guidelines), after-treatment products, voluntary off-site mitigation projects, the provision of funds for air district off-site mitigation projects, and/or other options as they become available. In addition, implementation of these measures would also result in a 5 percent reduction in ROG emissions from heavy-duty diesel equipment. The local air district shall be contacted to discuss alternative measures.

Significance After Mitigation

Mitigation Measure 3.3-1 provides multiple methods to reduce operational emissions. These methods include reducing mobile-source emissions by improving the accessibility and feasibility of alternative transportation such as walking, biking, and public transit to reduce single-passenger vehicle trips and reducing emissions from the generation of energy used for building utilities through high-efficiency lighting, low-NO_x water heaters, rooftop solar panels, and energy efficient windows. Mitigation Measure 3.3-2 also provides multiple emissions reduction methods, specifically focused on reducing construction-related pollutants. These methods include reducing dust emissions by limiting vehicle speeds on unpaved surfaces and prohibiting grading activities in high-winds, and by reducing emissions from the combustion of fuels used in vehicles and equipment by means of limiting engine idling times and ensuring proper maintenance of equipment to ensure operational efficiency.

At the plan level, the effectiveness of these measures in reducing potential impacts to a less-than-significant level for individual projects that would occur under the 2025 Blueprint cannot be guaranteed, as the possibility remains for projects, despite implementing all feasible mitigation measures, to result in emissions above local thresholds of significance. Project-level environmental analysis would be required to be conducted to ensure that the mitigation measures above would reduce impacts to a less-than-significant level for individual projects. Notably, some air districts in the region (e.g., SMAQMD) also offer the option of paying off-site construction mitigation fees if the recommended actions do not reduce construction emissions to acceptable levels. However, this is not applicable to all air districts in the region.

Projects taking advantage of CEQA Streamlining provisions of SB 375 (PRC Sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measure described above to address site-specific conditions, resulting in impacts that are less than significant. However, SACOG cannot require the implementing agency to adopt these mitigation measures,

and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. Therefore, it is conservatively assumed that construction– and operations-related emissions would exceed an applied threshold of significance related to exposure to emissions and could cause adverse health outcomes. This impact would be **significant and unavoidable** for purposes of this program-level review.

Impact 3.3-3: Expose Sensitive Receptors to Substantial TAC Concentrations, Including Those from Construction and Operational Emissions

Sensitive receptors are defined as locations where pollutant-sensitive members of the population may reside or where the presence of air pollutant emissions could adversely affect use of the land, and typically include residential areas, hospitals, daycare facilities, elder-care facilities, elementary schools, and parks. As described above under the heading, "Sensitive Receptors," there are sensitive receptors located throughout the plan area. Particulate exhaust emissions from diesel-fueled engines (i.e., diesel PM) were identified as a TAC by CARB in 1998. The dose of diesel PM to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher level of health risk for any exposed receptor. Therefore, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period. According to the Office of Environmental Health Hazard Assessment, when an HRA is prepared to project the results of exposure of sensitive receptors to selected compounds, exposure of sensitive receptors to TAC emissions should be based on a 70- or 30-year exposure period. However, such assessments should be limited to the duration of activities associated with a proposed project if emissions occur for shorter periods (OEHHA 2015: 5-23, 5-24). Distance between receptors and pollution sources also play a role in the concentration of air pollutants to which receptors are exposed. CARB, in the *Air Quality and Land Use Handbook: A Community Health Perspective,* recommends avoiding siting new sensitive land uses, such as residences, schools, daycare centers, playgrounds, or medical facilities, within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day (CARB 2005).

Regional growth would generate TAC emissions associated with land use development and operation. Changes to the transportation system and changes in operations (due to changes in demand and as a result of transportation projects in the 2025 Blueprint) would affect the release of TACs associated with transportation emissions. These issues are discussed separately below.

Regional Growth and Land Use Change

Construction

The TAC that is the focus of this construction analysis is diesel PM because it is known that diesel PM would be emitted during construction of land use development projects. Construction-related activities associated with the buildout of the 2025 Blueprint would result in temporary, intermittent emissions of diesel PM from the exhaust of off-road equipment used during demolition and building modernization and on-road heavy-duty trucks. On-road diesel-powered haul trucks traveling to and from a construction area to deliver materials and equipment are less of a concern because they do not operate at any one location for extended periods of time such that they would expose a single receptor to excessive diesel PM emissions.

At this time, however, the timing, duration, and magnitude of construction activities, as well as the potential for overlapping construction from multiple projects to occur is unknown. Additionally, because the 2025 Blueprint does not include specific development proposals, the exact timing, haul truck routes, duration of construction activity, and types of equipment are unknown at this time and consequently a project-specific HRA cannot be conducted Nevertheless, it is foreseeable that future construction activities related to regional growth and land use change could generate TACs exceeding local thresholds for cancer risk (for example, SMAQMD's threshold of 10 in 1 million for carcinogenic risk and/or a noncarcinogenic hazard index of 1.0 or greater).

Operations

The 2025 Blueprint promotes a compact growth pattern paired with an efficient transportation system to facilitate a reduction in VMT within the region. The Development Pattern of the 2025 Blueprint involves a mixture of

development and redevelopment within the land use growth footprint that would accommodate projected population growth within the plan area through 2050.

TACs are unique among air pollutants because they are highly dispersive, causing localized rather than regional effects. To capture the range of TAC-related effects and their interface with land use and transportation, this discussion considers various scenarios in which new or existing receptors may be exposed to TAC emissions from new or existing sources. The following provides further description of these potential scenarios:

- New Sensitive Receptors Close to TAC Sources: areas where new sensitive receptors may be sited in proximity to any TAC sources (either stationary or mobile). CEQA does not generally require the consideration of the effects of existing environmental conditions on the future occupants or users of a project site absent exacerbation of existing hazards. Nonetheless, the analysis of how existing environmental hazards, even those that would not be exacerbated, is provided for informational purposes. New Stationary TAC Sources Close to Sensitive Receptors: areas where stationary TAC sources may be sited in proximity existing sensitive receptors.

Each analysis includes a discussion of permitted and non-permitted sources. The potential impact of TACs is defined in the CARB Handbook based on TAC source. The recommended distances for siting new sensitive receptors are outlined in Section 3.3.1, "Regulatory Setting." The permitting would address some of the impacts of TACs, but it may not fully mitigate to a less-than-significant level. Similarly, local jurisdictions may take actions that mitigate the impacts of non-permitted sources as part of their land use approval process, but these actions may not fully mitigate to a less-than-significant level.

Figure 3.3-4 shows the existing stationary TACs sources known to SACOG in the plan area.

Non-Permitted Sources

Non-permitted sources are stationary sources that emit TAC emissions but do not require a permit from the local air district to operate.

- Distribution Centers: The CARB Handbook suggests that local agencies avoid siting new sensitive receptors within 1,000 feet of a distribution center that accommodates more than 100 trucks per day, more than 40 trucks with operating TRUs per day, or where TRU unit operations exceed 300 hours per week and consider the configuration of existing distribution centers to avoid locating residences and other new sensitive land uses near entry and exit points. There are currently distribution centers in the plan area. It is not known at this time where future distributions centers may be located. It is also not known how many future distributions centers may be sited in the plan area. These sources would, however, be subject to air district rules.
- Rail yards: The CARB Handbook suggests that local agencies avoid siting new sensitive receptors within 1,000 feet of a major service and maintenance rail yard. If a proposed receptor is within 1 mile of a rail yard, the CARB Handbook suggests considering possible siting limitations and mitigation approaches. The plan area includes the J.R. Davis Rail Yard in the city of Roseville.
- Freeways and major roadways: The CARB Handbook suggests that local agencies avoid siting new sensitive receptors within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day. Figure 3.3-2 shows the roads with a projected volume of 100,000 vehicles per day, and rural roads with capacity of 50,000 vehicles per day located within the plan area. Table 3.3-16 shows the population living within 500 feet of freeways and roadways that meet these capacities in 2020 and 2050.

Permitted Sources

Permitted sources are facilities that are required to obtain a permit from the applicable local air district to operate.

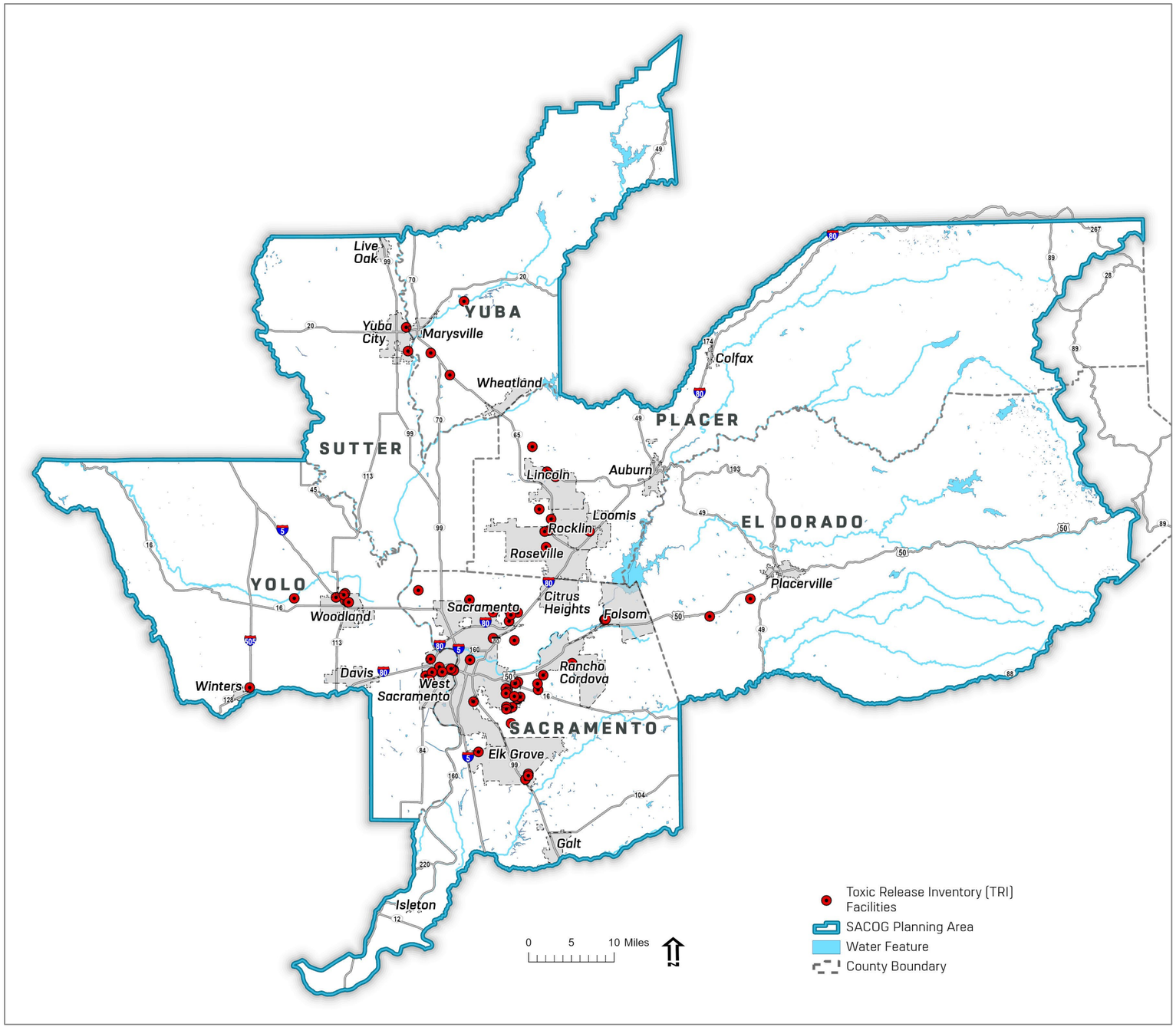
- Ports: CARB recommends that local agencies avoid siting new sensitive receptors immediately downwind of ports where maximum concentrations of TAC emissions would likely occur as a result of windblown dispersal. The existing Port of West Sacramento is located in the City of West Sacramento. No additional ports are proposed or already exist in the 2025 Blueprint.
- Refineries: CARB recommends that local agencies avoid siting new sensitive receptors immediately downwind of petroleum refineries. There are refineries located in the plan area. No new refineries are proposed in the 2025 Blueprint.

- **Chrome plating facilities:** CARB recommends that local agencies avoid siting new sensitive receptors within 1,000 feet of a chrome plating facility. There are chrome plating facilities in the plan area, including in the City of Sacramento and in the City of Marysville.
- **Large gas dispensing facilities:** CARB recommends that local agencies avoid siting new sensitive receptors within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities. There are facilities located in the plan area with a permit for 3.6 million gallons per year of throughput. Not all facilities with this permit actually dispense this amount or greater. For purposes of this analysis, any facility with this type of permit was included as an identified TAC source. It is important to note that the permitted facilities could also include non-permitted sources (e.g., heavy-duty truck travel), and vice versa. However, such non-permitted sources would be subject to other regulations enforced by CARB.

While the CARB Handbook does not include siting distance recommendations for sensitive receptors near airports, there has been heightened scientific awareness and public debate over potential impacts that may result from the exposure of sensitive receptors to TACs generated by aircraft and ground support operations at and near airports. Sources of airport-related TACs include aircraft (e.g., air carriers, commuter and cargo aircraft, and general aviation), ground service equipment, and fuel storage and handling. TACs released by these sources include, but are not limited to, ROG (acetaldehyde, formaldehyde, benzene, and 1,3-butadiene), chromium, dioxins, lead, polycyclic aromatic hydrocarbons (PAHs), tetrachloroethylene, nickel, and toluene. Several studies and analyses have been performed to evaluate the risk posed by airport operations. Overall, the data and analyses from these studies provide an inadequate foundation to perform airport-related health studies. There are three public or public-serving airports in addition to the many private airports in the SACOG region.

Though exact future locations cannot be known at this time, regional growth and land use changes under the 2025 Blueprint would result in new sensitive receptors close (within the distance buffers identified by CARB) to TAC sources, potentially resulting in exposure to substantial TAC concentrations. The siting of new sensitive receptors would be subject to an individual jurisdiction's land use approval processes. The location and pattern of the 2025 Blueprint growth is important because it effects travel behavior and provides a means to determine the impact of future vehicle emissions in the plan area. A compact growth pattern served by an efficient and diverse transportation system provides the foundation to reduce automotive travel and increase walking, bicycling, and transit use—all of which reduce individual vehicle trips and associated VMT. Reduced VMT and vehicle trips are directly linked to reduced regional criteria air pollutant emissions and TAC emissions from mobile sources. However, compact development can also result in the close proximity of new sensitive receptors to localized sources of TACs.

Regional growth could also result in new stationary TAC sources to be sited in close proximity to existing sensitive receptors. The 2025 Blueprint does not directly propose the siting of any stationary TAC sources (i.e., new distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, large gasoline dispensing facilities, or other land uses that may accommodate major sources of TACs). However, the local jurisdictions' land use plans that form the basis of the Development Pattern of the 2025 Blueprint could include the siting of permitted and non-permitted TAC sources near sensitive receptors in commercial and industrial areas throughout the SACOG region. As noted above, CARB, CAPCOA, SMAQMD, FRAQMD, YSAQMD, and EDCAQMD provide guidance on siting of new sources. A full discussion is provided in Section 3.3.1, "Regulatory Setting."



Source: Prepared by SACOG in 2025.

Figure 3.3-4 Existing Facilities That Emit Toxic Air Contaminants

As is the case with existing industrial facilities, stationary sources, in addition to any other stationary sources that may emit TACs (except for non-permitted sources), would be subject to air district rules and regulations, including: general requirements, new source review, T-BACT requirements, Title V federal operating permit requirements, and NESHAPs. Thus, the applicable air district would analyze such sources based on their potential to emit TACs. If it were determined that the sources would emit TACs in excess of an air district's applicable threshold of significance, T-BACT would be implemented to reduce emissions. If the implementation of T-BACT would not reduce the risk below the applicable threshold, an air district would deny the required permit (or deny the renewal of existing permits). Even if multiple permitted TAC sources located in close proximity to each other generated a combined incremental increase in health risk in excess of the applicable air district standards (e.g., 10 in one million for excess cancer risk and/or a hazard index of 1.0 for non-cancer risk at the maximally exposed individual), these standards are incremental increase thresholds (e.g., increase over background) that inherently account for the possibility of sensitive receptors being exposed to risk from multiple TAC sources in addition to background risk levels. In other words, as incremental increase thresholds, they address the cumulative contribution of each individual stationary source of TACs. As a result, given compliance with applicable rules and regulations, operation of any stationary sources would not be expected to result in the exposure of sensitive receptors to TACs at levels exceeding an air district's significance threshold.

While new permitted sources can mitigate TACs through local air district processes (e.g., permit requirements), as noted above, some stationary TAC sources do not require permitting by the applicable air district and some permitted facilities may include non-permitted sources (e.g., heavy-duty truck travel) that are not controlled by compliance with existing processes. Therefore, there is potential for development related to regional growth and land use changes under the 2025 Blueprint to generate TACs exceeding local thresholds for cancer risk, such as SMAQMD's threshold of 10 in 1 million for carcinogenic risk and/or a noncarcinogenic hazard index of 1.0 or greater.

Transportation Network Improvements and Programs

Construction

With respect to transportation projects proposed as a part of the 2025 Blueprint, the plan includes 702 new lane miles of highways, arterials, and expressways to accommodate the addition of approximately 580,000 people in the plan area. Additionally, the 2025 Blueprint proposes transportation infrastructure improvements such as road and highway maintenance and rehabilitation, major local road improvements, state highway improvements, construction of new bridges and repair/maintenance of existing bridges, bike lanes, pedestrian paths, complete streets and recreational trails. Construction activities that would result from these proposed transportation network improvements could generate temporary, intermittent emissions of diesel PM from the exhaust of off-road heavy-duty diesel equipment used for transportation infrastructure improvement projects which may involve activities such as excavation, paving, application of architectural coatings, on-road truck travel, and other miscellaneous activities. Construction activity related to implementation of the proposed transportation network improvements under the would occur sporadically throughout the plan area through 2050. As stated above, existing sensitive receptors are located throughout the plan area. However, at the plan level, individual sensitive receptors were not identified. In addition, studies show that diesel PM is highly dispersive and that concentrations of diesel PM decline with distance from the source (e.g., 500 feet from a freeway, the concentration of diesel PM decreases by 70 percent) (Zhu et al. 2002, cited in CARB 2005). These studies illustrate that diesel PM is highly dispersive and that receptors must be near emission sources for a long period to experience exposure at concentrations of concern. Notably, a portion of the individual projects under the 2025 Blueprint would be relatively small projects such as pedestrian and bicycle infrastructure projects, which do not typically emit substantial pollutant concentrations in comparison to large development projects. Further, any roadway improvement projects would likely occur in a linear manner, meaning that no single receptor would be exposed to construction emissions for an extended period of time as construction activities move linearly down a roadway. Given the temporary and intermittent nature of construction activities likely to occur within specific locations in the plan area (i.e., construction of transportation network improvements are not likely to occur in any one part of the plan area for an extended time), the dose of diesel PM of any one receptor is exposed to would be limited. Additionally, pedestrian and bicycle infrastructure projects would be relatively small projects in comparison to development projects.

At this time, however, the timing, duration, and magnitude of construction activities, as well as the potential for overlapping construction from multiple projects to occur is unknown. Details regarding exact sensitive receptor locations and specific details regarding construction phasing, haul truck routes, duration of construction activity, and types of equipment are unknown at this time and consequently a project-specific HRA cannot be conducted. Nevertheless, it is foreseeable that future construction activities related to transportation network improvements could generate emissions of diesel PM in concentrations exceeding local thresholds and thus pose a significant health risk to sensitive receptors.

Operations

The population residing close to highways or busy roadways may experience adverse health effects beyond those typically found in urban areas. Proximity to highways increases cancer risk and exposure to PM. Similarly, proximity to heavily travelled transit corridors and intersections would expose residents to higher levels of diesel PM and CO. As stated above, CARB, in the *Air Quality and Land Use Handbook: A Community Health Perspective* recommends avoiding siting new sensitive land uses, such as residences, schools, daycare centers, playgrounds, or medical facilities, within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day (CARB 2005). Implementation of transportation network improvements under the 2025 Blueprint could result in new mobile TAC sources (freeways and major roadways) being sited in proximity to sensitive receptors or the use of existing increasing due to transportation projects included in the plan and thus resulting in new TAC impacts.

Mobile sources are the primary source of TACs within the transportation footprint of the 2025 Blueprint. The 2025 Blueprint would place new freeways and major roadways (and increase traffic on existing roadways), a source of TACs, close to sensitive receptors as defined by the CARB Handbook and described in the general discussion of this impact (CARB 2005).

Improvements to existing facilities (e.g., road widenings, intersection or interchange improvements, intelligent transportation system upgrades, turn pockets, high-occupancy vehicle lanes, and auxiliary and transition lanes) all have the potential to increase the amount of locally generated TAC emissions in an area where the transportation infrastructure capacity is increased. Some roadway improvements would be intended to ease congestion and reduce idling, while others would be intended to improve physical roadway conditions. The improvements may prove beneficial on a regional scale, associated with the provision of more non-vehicle travel options, but also may result in more localized air quality impacts. It is important to note that site-specific data would be required to conduct an HRA (e.g., hourly traffic volumes, exact location of receptor with respect to the source in terms of distance and direction [upwind vs. downwind]). While it is important that TAC emissions are reduced regionally, as noted above, exposure is primarily based on local parameters (e.g., ADT on local roadway segment, wind direction in relation to source and receptor). Thus, even though mobile source emissions will decrease over the planning period, there may still be increases in localized exposure to TACs.

Investments in new transportation facilities could increase, redirect, or reduce the amount of vehicle travel in an area. In areas where new transportation infrastructure is proposed, there would be additional vehicle travel and associated vehicle-generated TACs. Investment in new facilities is expected to align with growth patterns, so that new roadway and highway investments serve planned housing and employment centers and would be compatible with surrounding land uses. More specifically, the design and expansion of the system paired with land use choices is intended to reduce VMT by offering an array of mode choices and reduced trip travel, while biking, walking, and transit options are enhanced. By design, new facilities may redirect traffic off of congested routes or upgrade the facilities to better-accommodate existing vehicle travel in an area. As noted, a variety of other factors also contribute to the declines of VMT over existing conditions, including vehicle technology, cleaner fuels, and fleet turnover.

Implementation of the 2025 Blueprint would result in the construction of additional miles of bicycle facilities, including bicycle and pedestrian bridges or overpasses, which have the potential to facilitate change in travel choices by making non-vehicle travel safer and more convenient, which reduces vehicle-generated emissions. The 2025 Blueprint also includes additional daily vehicle service hours for all modes of transit, bus and shuttle route miles, and light rail and streetcar route miles. Increasing the availability and frequency of transit service is expected to result in fewer vehicle trips per capita, which in turn would reduce emissions of TACs from mobile sources.

In addition, growth in the region would continue to contribute traffic to existing roadways within 500 feet of sensitive receptors. As described in Section 3.3.1, "Regulatory Setting," the CARB Handbook recommends avoiding siting new sensitive land uses within 500 feet of certain roadways because the exposure to TACs is generally higher within that proximity. This 500-foot screening distance serves as a generally applicable buffer or screening distance. However, risk is site-specific, as the height of freeways, prevailing winds, and other factors can make a significant difference in whether an individual area is exposed to elevated risks. In addition, transportation infrastructure project design features may be sufficient to reduce exposure to a level of 10 in one million, despite distance from a freeway.

As Table 3.3-15 shows, in 2020, 1.86 percent of the population of the plan area lived within 500 feet of a roadway with existing or projected levels of traffic that exceed the screening level traffic volumes. In 2050, it is projected that 2.25 percent of the population will live within this proximity. This increase in percentage would occur from the siting of new receptors within the proximity of existing roadways, as well as investments in roadways that result in increased vehicle capacity that would cause traffic volume screening levels to be exceeded where they were not exceeded previously. While the 2025 Blueprint is encouraging new and existing sensitive receptors close to existing and proposed heavily traveled corridors, the actual number and proportion is small. In addition, though there is a larger percent of the population within 500 feet of freeways and major roadways under 2050 conditions, existing sensitive receptors could experience a decrease in localized emissions even with an increase in traffic volumes, depending on the percent increase in traffic versus the amount of reduction achieved from improved vehicle technology, cleaner fuels, and fleet turnover. However, the population shown in Table 3.3-15 would include new sensitive receptors and the exact exposure at existing sensitive receptors would vary depending on specific local parameters that are not available at this time at the program level.

Table 3.3-15 Population Living within 500 feet of an Identified Toxic Air Contaminant Roadway in 2020 and 2050 by County

County	Within 500' Buffer - 2020 % of total population	Within 500' Buffer - 2050 % of total population
El Dorado	0.06%	0.05%
Placer	0.85%	1.09%
Sacramento	2.60%	3.07%
Sutter	0.00%	0.00%
Yolo	1.19%	1.92%
Yuba	0.00%	0.00%
Region Total	1.86%	2.25%

Source: Data compiled by SACOG in 2025.

As shown in Table 3.3-16, below, PM_{10} and $PM_{2.5}$ from on-road diesel vehicles are expected to decrease substantially in the plan area over the life of the 2025 Blueprint. A first approximation can be made of the impact in the TAC buffer areas using the population changes, the VMT changes from diesel-powered vehicles, and the declining $PM_{2.5}$ emission rates through the plan period. This analysis was performed using EMFAC2021, which is an EPA-approved emissions model. EMFAC2021 is representative of CARB's best understanding of motor vehicle travel activities and their associated emissions levels at the time of releasing the NOP for this Draft EIR as compared to previous editions such as EMFAC2011 and EMFAC2014.

Table 3.3-16 Change in Emissions from On-Road Diesel Vehicles between 2020 and 2050

Year	$PM_{2.5}$ (Tons/Day)	PM_{10} (Tons/Day)
2020	0.40	0.42
2050	0.13	0.14
Percent Change	-33%	-33%

Source: Modeling performed by Ascent in 2025. Modeld values may vary from the 2025 Blueprint due to differences in modeling methodology.

A first approximation can also be made of the impact in the CARB buffer areas for TACs using the population changes, the VMT changes from diesel powered vehicles and the declining $PM_{2.5}$ emission rates through the plan period. Table 3.3-17, below, provides an estimate of the average $PM_{2.5}$ exposure per person in 2020 and 2050 and presents the net change in exposure with implementation of the 2025 Blueprint. The population within the buffer areas are from the land use allocation. The total VMT is from all roads within the buffer areas, including freeways and surface streets. The percent of VMT from diesel vehicles is the Sacramento County average from the CARB emissions model. The $PM_{2.5}$ emission rates are the weighted average CARB rates for all diesel vehicles in each year assuming the Sacramento County fleet mix. The change in exposure per person from 2020 to 2050 is a decrease of 0.014 lb/day/person, or an 82 percent decrease per person. While detailed study is needed for any particular area, this analysis indicates the general direction and magnitude of $PM_{2.5}$ exposure that would be expected.

Table 3.3-17 Net Change in Maximum Daily $PM_{2.5}$ Exposure Between 2020 and 2050

Year	Population Within 500' Buffer	VMT % diesel	VMT Total	$PM_{2.5}$ rate g/mi	$PM_{2.5}$ lbs.	Avg. exposure (lb/day)
2020	47,250	9%	60,510,080	0.01	836	0.018
2050	70,201	7%	70,222,434	0.002	268	0.004
Net Change	+22,951	-2%	+9,712,354	-0.008	-568	-0.014

Source: Modeling performed by Ascent in 2025. Modeled values may vary from the 2025 Blueprint Air Quality Conformity Analysis due to differences in modeling methodology.

As discussed above, site-specific source and receptor data are necessary to conduct an HRA. While it is important that TAC emissions are reduced regionally, exposure must nevertheless be considered and should be assessed in consideration of local parameters and site-specific dispersion modeling. Localized and site-specific inputs are important because many features of the environmental setting, for both the source (e.g., roadway height, urban/rural, road speed and configuration, traffic volumes) and the receptor (e.g., housing orientation, climatic conditions, vegetation) differ from site to site and location to location. In other words, the buffer distances, and the corresponding population, shown in Table 3.3-17, above, are general guidance for determining the level of risk and exposure. Project design may be sufficient to reduce cancer risk for nearby receptors below the level of significance for the respective district, despite distance from a freeway. Additionally, when assessing the public health impact of TACs, it should be noted that a risk analysis is based upon 70- or 30-year exposure (OEHHA 2015). The population impacts shown in Table 3.3-17 do not account for the duration of exposure.

In addition, though health risk, in particular for roadways, focuses on diesel PM, there is also research discussing non-cancer risks and risks specifically from ultrafine particulate matter (UFP), a component of $PM_{2.5}$.

Despite the estimated reduction in exposure to receptors shown in Table 3.3-17 above, the site-specific TAC source conditions and the sensitive receptor conditions are unknown at this time. As discussed above, while improvements to existing facilities associated with the provision of more non-vehicle travel options (e.g., road widenings, intersection or interchange improvements, intelligent transportation system upgrades, turn pockets, high-occupancy vehicle lanes, and auxiliary and transition lanes) may be beneficial on a regional scale, these improvements also have the potential to increase the amount of locally-generated TAC emissions in an area where the transportation infrastructure capacity is increased. Thus, impacts related to transportation network improvements from implementation of the 2025 Blueprint have the potential to expose sensitive receptors to substantial TAC concentrations and would thus be significant.

Summary

Regional growth and land use change as well as transportation network improvements under the 2025 Blueprint could result in exposure of sensitive receptors to construction-related TACs. Because individual project details such as the timing, duration, magnitude of construction activities; as well as other details such as haul truck routes, and types of equipment are unknown at this level of analysis, a project-specific HRA cannot be conducted. Therefore, it is assumed

that future construction activities related to regional growth and land use change, as well as transportation network improvements proposed under the 2025 Blueprint, could generate TACs exceeding local thresholds for cancer risk.

Regarding operational activities related to regional growth and land use change, exact future locations of new sensitive receptors cannot be known at this time and it is therefore assumed that regional growth and land use changes under the 2025 Blueprint would result in new sensitive receptors within the distance buffers identified by CARB to TAC sources and that new stationary and non-stationary sources of TACs to be sited near sensitive receptors throughout the region, potentially resulting in exposure to substantial TAC concentrations.

Regarding operational activities related to transportation network, the site-specific TAC source conditions and the sensitive receptor conditions are unknown at this time. As discussed above, while improvements to existing facilities may be beneficial on a regional scale, these improvements also have the potential to increase the amount of locally generated TAC emissions in an area where the transportation infrastructure capacity is increased. Thus, operations of transportation network improvements from implementation of the 2025 Blueprint have the potential to expose sensitive receptors to substantial TAC concentrations and would thus be significant. For these reasons, impacts related to TACs would be **significant.**

Mitigation Measures

SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following measures or other comparable measures identified by the lead agency at a project-level would reduce the impacts from potential exposure of sensitive receptors to substantial TAC concentrations and agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081).

Implement Mitigation Measure 3.3-2: Require Applicable Construction Measures

Mitigation Measure 3.3-3: Conduct a Site-Specific Health Risk Assessment

Where sensitive land uses or TAC sources meeting CARB's criteria in size and activity (i.e., heavy-duty trucks routes, stationary sources requiring air district permits) would be sited within the minimum CARB-recommended distances, a screening-level HRA, and, if warranted, a site-specific HRA, shall be conducted to determine all feasible mitigation and best practices. Identified feasible mitigations and best practices shall be implemented to reduce receptor cancer risks below 10 in one million or an acute hazard index of less than one. The HRA protocols of the applicable local air districts shall be followed or, where a district/office does not have adopted protocols, the protocol of SMAQMD or CAPCOA shall be followed. Note that the MSAT Protocol only applies to Sacramento County; however, many of the recommendations still apply in other areas. In addition, the MSAT Protocol addresses DPM and other MSATs. Best practices shall be applied as recommended and applicable, to reduce the impact to a less-than-significant level where feasible. The HRA should give particular attention to the nature of the receptor, recognizing that some receptors are particularly sensitive (e.g., schools, day care centers, assisted living and senior centers, and hospitals) and may require special measures. Examples of best practices that studies have suggested to be effective include:

- install, operate, and maintain in good working order a central heating, ventilation, and air conditioning (HVAC) system or other air intake system in the building, or in each individual unit, that meets or exceeds a minimum efficiency reporting value (MERV) of 13, a Micro-Particle Performance Rating (MPR) of at least 1500, or Filter Performance Rating (FPR) of at least 10 (which is equivalent to an MPR of 1500), and includes either high efficiency particulate air (HEPA) filters or American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE) certified 85 percent or higher;
- install passive (drop-in) electrostatic filtering systems, especially those with low air velocities (i.e., 1 mile per hour [mph]), as a part of the HVAC project HVAC system(s);
- maintain, repair, and/or replace the HVAC system on an ongoing and as needed basis or prepare an operation and maintenance manual for the HVAC system and the filter, for inclusion in the Covenants, Conditions and Restrictions (CC&Rs) for residential projects and a separate homeowners manual;

- orient air intakes away from TAC sources or provide shields or buffers to the maximum extent possible; maintain a vegetative barrier between new residential units consisting of tree species with year-round foliage and a porosity of 20 or 40 percent wherever feasible; and
- use tiered tree planting between roadways and sensitive receptors wherever feasible, using native, needled (coniferous) species, ensure a permanent irrigation source, and provide permanent funding to maintain and care for the trees.

Additionally, implementing agencies should contact the applicable air district and/or CAPCOA for the most current list of applicable best practices for limiting exposure of sensitive receptors to substantial TAC concentrations consistent with the CARB Handbook and MSAT Protocol Guidance Document.

Mitigation Measure 3.3-4: Implement the Strategies Contained in the CARB Technical Advisory

The implementing agency shall implement the strategies identified in the CARB Technical Advisory to reduce air pollution exposure near high-volume roadways to less-than-significant levels, where feasible. Examples of effective strategies include (CARB 2017):

- use of speed reduction mechanisms such as roundabouts to reduce the frequency of stop-and-go driving common among streets that support stop signs;
- use of traffic signal management to limit the frequency of stop-and-go driving and vehicle idling;
- enforcement and establishment of speed limit reductions of high-speed roadways;
- use of design elements that promote air flow and pollutant dispersion along street corridors to optimize air flow, building downwash, and pollution dispersal;
- incorporate bike lanes and sidewalks to promote alternative, zero-pollution modes of transportation; and
- construct solid barriers directly adjacent to high-volume roadways such as sound walls to improve downwash.

Mitigation Measure 3.3-5: Require Construction Health Risk Assessment

A site-specific HRA shall be required for all construction projects anticipated to last more than six months and located within 1,000 feet of sensitive receptors (as defined in California Health and Safety Code Section 42705.5[a][5]) regardless of intensity of construction. All recommendations from the HRA shall be enforced as conditions of approval of the development and the implementing agency shall require implementation of all feasible measures to reduce impacts to a less than significant level.

Significance After Mitigation

Use of air filtering systems, orientation of HVAC air intakes, tiered tree and vegetation planting, and decreased stop-and-go traffic and idling can substantially reduce TAC concentrations (CARB 2017). Field research studies, wind tunnel studies, and dispersion modeling exercises indicate that roadside concentrations of DPM and UFP would be reduced because of the implementation of a vegetative barrier (Baldauf et al. 2013; Breathe California 2008; Steffens et al. 2012; Hagler et al. 2013; Islam et al. 2012; Bowker et al. 2007). Wind tunnel studies of redwood, deodar, and Live Oak tree species indicate that vegetation can reduce concentrations of very fine particles (i.e., 0.25 microns or smaller, a size range representative of most DPM) by 30 to 80 percent at wind velocities of 1.0 meter per second (2.2 miles per hour) and generally more removal occurs at lower wind speeds, particularly for UFPs (Breathe California 2008). Other field studies found the presence of tree canopy throughout a roadside area to be effective in reducing concentrations of diesel PM and UFP emitted on a nearby freeway (Dadvand et al. 2015). However, this same body of literature also indicates that the extent of the reduction from vegetation varies according to multiple factors, including species selection (e.g., the drag coefficient of the selected species, leaf area density, porosity), barrier width and height, barrier layout, meteorological conditions, highway geometry, road properties, and vehicle fleet characteristics.

In addition, requiring UFP filtration systems with a minimal removal rate of 95 percent to reduce indoor concentrations of UFP would also result in a substantial reduction to indoor concentrations of DPM. The vehicle speed reduction measures listed under Mitigation Measure 3.3-4 would result in reduced stop-and-go driving and hard accelerations thereby reducing emissions rates. Also, according to recent studies, the optimal speed range for fuel consumption and lowest emissions rates is achieved within the range of 35 to 55 miles per hour.

While Mitigation Measures 3.3-3 and 3.3-4 are expected to result in reductions to exposure levels of UFPs and DPM, the level of effectiveness cannot be quantified at this time. Due to uncertainty in individual project conditions (e.g., location of receptor in relation to source [upwind versus downwind], the effectiveness of filtering systems depending on the TACs present) the extent to which this measure would reduce emissions is unknown at this time as such details are not available at the plan level. Additionally, construction is a substantial source of TACs (e.g., DPM exhaust, NOA), although standard construction mitigation measures eliminate, avoid, or minimize the risk of adverse health effects from exposure from TACs. Thus, Mitigation Measure 3.3-2 is required to minimize potential construction-related TACs.

If an implementing agency adopts these mitigation measures, Impact 3.3-3 may be reduced. However, at the plan level, the effectiveness of these measures in reducing potential impacts to a less-than-significant level for individual projects that would occur under the 2025 Blueprint cannot be guaranteed. This is because the possibility remains for individual projects, despite implementing all feasible measures recommended in a site-specific HRA, to continue to result TAC emissions and health risks above local thresholds of significance. In this scenario, the lead agency would be responsible for determining appropriate action in regard to project implementation. For projects proposing to streamline environmental review, lead agencies must conduct project-level analysis for each project to analyze whether, based on substantial evidence in the record, the proposed mitigation would reduce the impact to less than significant. However, SACOG cannot require the implementing agency to adopt these mitigation measures, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. Therefore, this impact would be **significant and unavoidable**.

Impact 3.3-4: Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People

Regional Growth and Land Use Change

Construction

The predominant source of power for construction equipment is diesel engines. Implementation of the 2025 Blueprint land use growth pattern would result in the construction of new developments that could result in the generation of odors from the use of construction equipment such as dozers, loaders, excavators, forklifts, cranes, backhoes, and paving equipment during project buildout. Exhaust odors from diesel engines, as well as emissions associated with paving and the application of architectural coatings may be considered offensive to some individuals. The generation of these odor emissions would vary greatly on a day-to-day basis depending on the type of construction activities. Application of architectural coatings would also be a source of offensive odors from VOCs. However, because the application of architectural coatings would be required to comply with local regulations for VOC limits on coatings used, potential construction odors would be minimized. Minor odors from the use of heavy-duty diesel equipment would be intermittent and temporary and would dissipate rapidly from the source with an increase in distance. Given the temporary nature of construction activities and the dispersion properties of diesel PM, construction related to regional growth and land use change under the 2025 Blueprint is not anticipated to result in substantial odor-related effects during construction.

Operations

The 2025 Blueprint does not specifically identify odor-producing facilities, as it does not forecast land use to that level of specificity. However, operations-related activities at the new facilities (e.g., industrial and/or commercial uses) could create odors, exposing existing sensitive receptors that are not currently affected under existing conditions. Specific uses are not yet known, and detailed site and grading plans have not yet been developed. However, these types of uses could entail composting or recycling operations, manufacturing, painting/coating operations (e.g., auto body shops), and coffee roasters located in close proximity to existing receptors. Because odors are subjective, new fast-food restaurants and bakeries may also be considered odorous sources. Most, but not all, of these source types would likely be subject to local air district permitting processes. However, the main function of the permitting process is to control the quantity of criteria air pollutants and TACs along with associated exposure of sensitive receptors. Odors issues are not typically addressed through the permitting process; they are, however, subject to various applicable air district rules. Permits may establish a performance threshold of condition that a source cannot create a

nuisance, but generally potential odor issues and the recommendation of specific controls are addressed through established applicable air district rules, and/or the project-level CEQA analysis if one is conducted. In addition, there are some uses (e.g., agriculture-related operations) that are exempt from the local air districts odor nuisance authority due to the "Right to Farm Act" (California Civil Code Section 3482.5). Thus, new facilities could result in the exposure of existing sensitive receptors to odor sources.

The majority of transportation network improvements that would be implemented under the proposed 2025 Blueprint would occur in urbanized areas, where roadway improvements would not have an impact on the number of people exposed to objectionable odors at the regional level. Transportation projects do emit diesel PM, which has an odor, but the odor dissipates quickly and within a small dispersion area. Additionally, diesel PM is not considered to be a major odor source and thus not considered to be a public nuisance.

Implementation of the 2025 Blueprint could also result in the development of new sensitive receptors near existing odor sources. The potential conflict is considered significant if the proposed development is at least as close as any other site that has already experienced significant odor problems related to the odor source. The local air districts within the plan area may recommend operational changes, add-on controls, process changes, or buffer zones where feasible to address odor complaints. When this occurs, the mitigation options are more limited and consist primarily of modifications to the proposed new structures to minimize exposure to odors (e.g., HVAC filters and other construction treatments) and notification to incoming property owners regarding the existence of pre-existing odor-emitting facilities and operations (e.g., similar to aviation easements for noise). Specific uses are not yet known, and detailed site and grading plans have not yet been developed. Therefore, the local parameters that affect odor exposure are also not known (e.g., wind direction), meaning that new sensitive receptors could be exposed to existing odor sources.

Therefore, at the regional level, there is the potential for objectionable odors related to the projected land use pattern from implementation of the 2025 Blueprint to affect a substantial number of people.

Transportation Network Improvements

Construction

Construction-related odor impacts would be similar to those disclosed under the heading above for regional growth and land use impacts. Implementation of the 2025 Blueprint transportation network improvements would result in the construction of new transportation network infrastructure such as complete streets, bike lanes, pedestrian paths, transit facilities, highway and freeway lanes, and overpasses/bridges as well as construction activities related to the improvement of existing infrastructure. These activities could result in the generation of odors from the use of construction equipment such as dozers, loaders, excavators, forklifts, cranes, backhoes, and paving equipment. Exhaust odors from diesel engines, as well as emissions associated with paving and the application of architectural coatings and roadway paint may be considered offensive to some individuals. The generation of these odor emissions would vary greatly on a day-to-day basis depending on the type of construction activities. Application of architectural coatings would also be a source of offensive odors from ROG. However, because the application of architectural coatings would be required to comply with local regulations for ROG limits on coatings used, potential construction odors would be minimized. Minor odors from the use of heavy-duty diesel equipment would be intermittent and temporary and would dissipate rapidly from the source with an increase in distance. Given the temporary nature of construction activities and the dispersion properties of diesel PM, construction related to transportation roadway improvements under the 2025 Blueprint is not anticipated to result in an odor-related impact during construction.

Operations

The majority of transportation network improvements that would be implemented under the proposed 2025 Blueprint would occur in urbanized areas, where roadway improvements would not have an impact on the number of people exposed to objectionable odors at the regional level. Transportation projects do emit diesel PM, which has an odor, but the odor dissipates quickly and within a small dispersion area. Additionally, diesel PM is not considered to be a major odor source and thus not considered to be a public nuisance. Therefore, the transportation element of the 2025 Blueprint is not considered a source of objectionable odor.

Summary

Given the temporary nature of construction activities and the dispersion properties of diesel PM, construction related to regional growth and land use change projects as well as transportation network improvement projects under the 2025 Blueprint are not anticipated to result in an odor-related impact during construction. Operation of transportation infrastructure projects may result in odorous diesel PM emissions, however these odors dissipate quickly and have a small dispersion area. Additionally, diesel PM is not considered to be a major odor source and thus not considered to be a public nuisance.

Regarding operation of the proposed 2025 Blueprint land use growth pattern, operation-related activities at facilities such as composting or recycling operations, manufacturing, painting/coating operations (e.g., auto body shops), and coffee roasters could generate odors, exposing existing sensitive receptors that are not currently affected under existing conditions. Further, there is the potential for operation of agriculture-related land uses that are exempt from the local air districts odor nuisance authority due to the "Right to Farm Act" (California Civil Code Section 3482.5). Thus, new facilities could result in the exposure of existing sensitive receptors to odor sources. Implementation of the 2025 Blueprint could also result in the development of new sensitive receptors near existing odor sources.

Because specific uses are not known at this level of analysis, and detailed site and grading plans have not yet been developed, it is assumed that new and existing sensitive receptors could be exposed to new and/or existing odor sources. This impact would be **significant**.

Mitigation Measures

SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measure or other comparable measure identified by the lead agency at a project-level would reduce the impacts from objectionable odors with the potential to affect a substantial number of people, and agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081).

Mitigation Measure 3.3-6: Require Applicable Local Air District Measures and Best Practices Related to Odors

Implementing agencies shall require assessment of new and existing odor sources for individual non-agricultural land use projects to determine whether sensitive receptors would be exposed to objectionable odors and apply recommended applicable mitigation measures as defined by the applicable local air district and best practices.

Examples of mitigation measures that may be applied where feasible and necessary to address site-specific impacts, include but are not limited to:

- Proposed industrial, commercial, or convenience land uses (e.g., fast-food restaurants, painting operations) that have the potential to emit objectionable odors shall be located as far away as feasibly possible from existing and proposed sensitive receptors and oriented where possible to place buildings or other obstructions between the odor source and downwind receptors.
- The odor-producing potential of land uses shall be considered when the type of facility that would occupy industrial, commercial, or convenience areas is considered.
- If an odor-emitting facility is to occupy space in the industrial, commercial, or convenience area, the odor-producing potential of the source and potential control devices shall be determined in coordination with the local air district and shall be based on the number of complaints associated with existing sources of the same nature. Odor-control devices (e.g., wet chemical scrubbers, HVAC filters, activated carbon scrubbers, biologically active filters, enclosures) shall be identified in the improvement plans before the approval of building permits. The odor-control devices shall be installed before the issuance of certificates of occupancy for the potentially odor-producing use.
- Require notification to incoming property owners (e.g., real estate disclosures) regarding the existence of pre-existing odor-emitting facilities or operations (e.g., similar to avigation easements for noise).

Also, see specifically SMAQMD's Guide to Air Quality Assessment in Sacramento County, which.an extensive list of technology- and design-based odor reduction measures in its Technology- and Design-Based Odor Reduction Measures appendix.

Significance After Mitigation

While Mitigation Measure 3.3-6 would not eliminate sources of odor, it would aid in reducing exposure to odors as a result of implementation of the 2025 Blueprint and ensure disclosure of pre-existing conditions. If an implementing agency adopts Mitigation Measure 3.3-6, the impact would be reduced to less than significant. Projects under the 2025 Blueprint taking advantage of CEQA Streamlining provisions of SB 375 (PRC Sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measure described above to address site-specific conditions, resulting in impacts that are less than significant. However, SACOG cannot require the implementing agency to adopt these mitigation measures, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. Therefore, this impact would be **significant and unavoidable** for purposes of this program-level review.

3.4 BIOLOGICAL RESOURCES

This section evaluates the potential impacts that may occur with implementation of the 2025 Blueprint on biological resources known or with potential to occur in the plan area. It summarizes relevant federal, state, and local regulations that pertain to biological resources and describes the existing environmental conditions. The analysis includes a description of the methods used for assessment of the potential direct and indirect impacts of 2025 Blueprint implementation and mitigation measures to address impacts determined to be significant or potentially significant. The information presented in this section is based on a review of existing and available information and is regional in scope. Data, analysis, and findings provided in this section are programmatic for broad application under the 2025 Blueprint rather than site-specific.

The following data were reviewed in preparation of this analysis:

- California Natural Diversity Database (CNDDB) records for the 227 (see Appendix C-1) US Geological Survey (USGS) 7.5-minute quadrangles including and surrounding the plan area (CNDDB 2024);
- California Native Plant Society (CNPS) Rare Plant Inventory records for the 227 USGS 7.5-minute quadrangles including and surrounding the plan area (CNPS 2024);
- list of species that may be affected by activities implemented in the plan area obtained from US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) online tool (USFWS 2024);
- California Wildlife Habitat Relationships (CWHR) range maps (CDFW 2016);
- *Manual of California Vegetation* (Sawyer et al. 2009);
- Cornell Lab of Ornithology eBird observation database (eBird 2025);
- US Fish and Wildlife Critical Habitat (USFWS 2025);
- NOAA Fisheries Critical Habitat (NOAA Fisheries 2023);
- California Essential Habitat Connectivity (Spencer et al. 2010); and
- aerial photographs of the project site and region.

Comments regarding biological resources were submitted in response to the notice of preparation. Comments pertained to impacts on resources including sensitive habitats (e.g., watersheds, rivers, creeks, wetlands, riparian habitat, forests); plant and wildlife species (e.g., listed species, fully protected wildlife species, sensitive species, nesting birds, light pollution, noise); native nursery sites (e.g., bat maternity roosts); breeding, nesting, and foraging habitat; and wildlife corridors. Ecosystem restoration areas and how they overlap with the plan area were also noted in the comments. These issues are addressed in the impact analysis below. All comments received in response to the notice of preparation are presented in Appendix A.

3.4.1 Regulatory Setting

FEDERAL

Federal Endangered Species Act

Pursuant to the federal Endangered Species Act (ESA) (16 USC Section 1531 et seq.), USFWS regulates the taking of species listed in the ESA as threatened or endangered. In general, persons subject to ESA (including private parties) are prohibited from "taking" endangered or threatened fish and wildlife species on private property, and from "taking" endangered or threatened plants in areas under federal jurisdiction or in violation of state law. Under Section 9 of the ESA, the definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS has also interpreted the definition of "harm" to include significant

habitat modification that could result in take. There is currently a proposed rule (Federal Register Vol. 90 No. 73, USFWS 2025) to rescind the definition of "harm" from ESA's "take" definition; however, a final rule has not been published.

Section 10 of the ESA applies if a non-federal agency is the lead agency for an action that results in take and no other federal agencies are involved in permitting the action. Section 7 of the ESA applies if a federal discretionary action is required (e.g., a federal agency must issue a permit), in which case the involved federal agency consults with USFWS.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it will be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. Under the MBTA, "take" is defined as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities." A take does not include habitat destruction or alteration, as long as there is not a direct taking of birds, nests, eggs, or parts thereof. The current list of species protected by the MBTA can be found in Title 50 of the Code of Federal Regulations (CFR), Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act, enacted in 1940 and amended multiple times since, prohibits the taking of bald and golden eagles without a permit from the secretary of the interior. Similar to the ESA, the Bald and Golden Eagle Protection Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb" (16 USC Sections 668–668c). For the purpose of the act, disturbance that would injure an eagle, decrease productivity, or cause nest abandonment, including habitat alterations that could have these results, are considered take and can result in civil or criminal penalties.

Section 404 of the Clean Water Act

Section 404 of the federal Clean Water Act (CWA) (33 USC Section 1344) requires a project applicant to obtain a permit before engaging in any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Fill material is material placed in waters of the United States where the material has the effect of replacing any portion of a water of the United States with dry land or changing the bottom elevation of any portion of a water of the United States. Waters of the United States include navigable waters of the United States; interstate waters; all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce; tributaries to any of these waters that are relatively permanent standing or continuously flowing bodies of water; and wetlands adjacent to and with a continuous surface connection to these waters. Wetlands are defined as those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Potentially jurisdictional wetlands must meet three wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology. Wetlands that meet the delineation criteria may be jurisdictional under Section 404 of the CWA pending US Army Corps of Engineers (USACE) verification.

Section 401 Water Quality Certification

Under Section 401 of the CWA (33 USC Section 1341), an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the state's water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the State Water Resources Control Board (SWRCB) to the regional water quality control boards (RWQCBs).

US Department of Transportation Act (Section 4[f])

Per Section 4(f) of the U.S. Department of Transportation Act (49 USC Section 303), the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance or land from a historic site of national, state or local significance as determined by the officials having jurisdiction thereof, unless there is no

feasible and prudent alternative to the use of such land and such program, and the project includes all possible planning to minimize harm resulting from the use. The policies Section 4(f) engendered are widely referred to as "Section 4(f)" matters.

Construction of recreational improvements in a recreation area, including enhancement done as part of mitigation for a transportation project are not subject to Section 4(f) provided they do not permanently incorporate land into a transportation facility, do not appreciable change the use of the property, and the officials having jurisdiction agree (Federal Highway Administration Section 4(f) Policy Paper, Response to Question 22, March 1, 2005).

Some of the areas under jurisdiction of Section 4(F) within the plan area include Sutter Bypass, Daugherty Hill, Spenceville, Feather River, Lake of the Woods State Wildlife Area, Fremont Weir, Sacramento Bypass wildlife areas, Auburn State Recreation Area, Marshall Gold Discovery State Historic Park, Folsom Lake State Recreation Area, Brannan Island State Recreation Area, Stone Lakes National Wildlife Refuge, and Sutter National Wildlife Refuge.

STATE

Regulations

California Endangered Species Act

Pursuant to the California Endangered Species Act (CESA, Fish and Game Code Section 2050 et seq.), a permit from the California Department Fish and Wildlife (CDFW) is required for projects that could result in the "take" of a plant or animal species that is listed by the state as threatened or endangered. Under CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species but, unlike the federal definition, does not include "harm" or "harass." As a result, the threshold for take is higher under CESA than under the federal ESA. Authorization for take of state-listed species can be obtained through a Fish and Game Code Section 2081 Incidental Take Permit.

California Game Code Sections 3503 and 3503.5, Protection of Bird Nests and Raptors

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 of the Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal or disturbance caused by project construction or other activities that cause the adults to abandon the nest, resulting in loss of eggs or young.

California Fish and Game Code Sections 3511, 4700, 5050, and 5515, Fully Protected Species

Protection of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the Fish and Game Code. These statutes prohibit take or possession of fully protected species and do not provide for authorization of incidental take, except under specific conditions. The Fish and Game Code allows CDFW to authorize incidental take of fully protected species for scientific research purposes, relocation to protect livestock, as part of a natural community conservation plan (NCCP), State Water Project projects, regional or local water agency infrastructure (other than the Delta conveyance project and desalination project), certain transportation-related projects, such as wildlife crossings, and wind and solar photovoltaic projects, provided that the project avoids, minimizes, or mitigates impacts on these species.

California Fish and Game Code Section 1602, Lake and Streambed Alteration

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under section 1602 of the Fish and Game Code. Under Section 1602 of the Fish and Game Code, it is unlawful for any person, governmental agency, or public utility to do the following without first notifying CDFW:

- substantially divert or obstruct the natural flow of, or
- substantially change or use any material from the bed, channel, or bank of any river, stream, or lake, or

- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with 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. A CDFW lake and streambed alteration agreement must be obtained for any action that may substantially adversely affect a fish or wildlife resource associated with a river, stream, or lake.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Chapter 368, Statutes of 1943), waters of the state fall under the jurisdiction of the appropriate RWQCB. RWQCBs must prepare and periodically update water quality control plans (basin plans). Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control point and nonpoint sources of pollution to achieve and maintain these standards. The RWQCB's jurisdiction includes federally protected waters, as well as areas that meet the definition of "waters of the state." "Waters of the state" is defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCB has the discretion to take jurisdiction over areas not federally protected under Section 401 of the CWA provided they meet the definition of waters of the state. Actions that affect waters of the state, including wetlands, must meet the RWQCB's waste discharge requirements.

State Wetland Procedures

The State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (State Wetland Procedures), as prepared by the SWRCB, went into effect on May 28, 2020, and was updated on April 6, 2021. The Procedures consist of four major elements: 1) a wetland definition; 2) a framework for determining if a wetland feature is a water of the state; 3) wetland delineation procedures; and 4) procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. The Procedures include a definition for wetland waters of the state that include (1) all wetland waters of the United States;[1] and (2) aquatic resources that meet both the soils and hydrology criteria for wetland waters of the United States but lack vegetation.[2]

The SWRCB has adopted the following definition of wetlands:

> *An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.*

Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.), which directed CDFW to carry out the legislature's intent to "preserve, protect, and enhance endangered plants in this state." NPPA gave the California Fish and Game Commission power to designate plants as rare or endangered and to require permits for collecting, transporting, or selling such plants. CESA expanded on the original NPPA and enhanced legal protection for plants. CESA established threatened and endangered species categories and grandfathered all rare animals—but not rare plants—into the act as threatened

[1] Therefore, wetlands that meet the current definition, or any historic definition, of waters of the U.S. are waters of the state. In 2000, SWRCB determined that all waters of the U.S. are also waters of the state by regulation, prior to any regulatory or judicial limitations on the federal definition of waters of the U.S. (California Code or Regulations title 23, section 3831(w).) This regulation has remained in effect despite subsequent changes to the federal definition. Therefore, waters of the state includes features that have been determined by the EPA or the USACE to be "waters of the U.S." in an approved jurisdictional determination; "waters of the U.S." identified in an aquatic resource report verified by the USACE upon which a permitting decision was based; and features that are consistent with any current or historic final judicial interpretation of "waters of the United States" or any current or historic federal regulation defining "waters of the United States" under the Clean Water Act.

[2] Less than 5 percent areal coverage at the peak of the growing season.

species. Thus, three listing categories for plants are employed in California: rare, threatened, and endangered. Sixty-four species, subspecies, and varieties of plants are protected as rare under the NPPA. The act prohibits take of endangered or rare native plants but includes exceptions for agricultural and nursery operations; for emergencies; and, after proper notification of CDFW, for vegetation removal from canals, roads, and other building sites; changes in land use; and other situations.

California Rare Plant Ranking System

CDFW works in collaboration with the CNPS to maintain a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. CDFW and CNPS jointly manage the Rare Plant Status Review groups, which consist of over 300 botanical experts from government agencies, academia, nonprofit organizations, and the private sector. The Rare Plant Status Review groups evaluate plant taxa rarity using NatureServe's element ranking methodology, which uses standardized ranking criteria and definitions, making ranks comparable across organisms and political boundaries. The methodology uses a rank calculator to increase repeatability and transparency of the process. Plant species are categorized by rarity in the California Rare Plant Rank (CRPR) system. This information is published in the Inventory of Rare and Endangered Vascular Plants of California (CNPS 2025). The CRPR system includes six rarity and endangerment ranks, which are summarized as follows:

- **CRPR 1A: Presumed Extirpated or Extinct.** Plants presumed extirpated in California and either rare or extinct elsewhere.
- **CRPR 1B: Rare or Endangered.** Plants rare, threatened, or endangered in California and elsewhere.
- **CRPR 2A: Extirpated in California.** Plants presumed extirpated in California but common elsewhere
- **CRPR 2B: Rare or Endangered in California.** Plants rare, threatened, or endangered in California but common elsewhere.
- **CRPR 3: Review List.** Plants about which more information is needed.
- **CRPR 4: Watch List.** Plants of limited distribution.

All plants with a CRPR are considered "special plants" by CDFW. The term "special plants" is a broad term used by CDFW to refer to all plant taxa inventoried in the CNDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, 2A, and 2B may be considered under CEQA as endangered, rare, or threatened species within the definition of State CEQA Guidelines Section 15380. CDFW recommends that CRPR 1 and 2 species be addressed within the context of CEQA analyses and documentation. In general, CRPR 3 and 4 species do not meet the definition of endangered, rare, or threatened pursuant to State CEQA Guidelines Section 15380; however, these species may be evaluated by the lead agency on a case-by-case basis to determine significance criteria under CEQA.

Oak Woodlands Conservation Act

The Oak Woodlands Conservation Act (Senate Bill [SB] 1334, Chapter 732, Statutes of 2004) requires counties to determine whether implementation of a project within their jurisdiction may result in a conversion of oak woodlands that would have a significant adverse effect on the environment (Public Resources Code [PRC] Section 21083.4). If the County determines that implementing a project would result in a significant adverse effect on oak woodlands, mitigation measures to reduce the significant adverse effect of converting oak woodlands to other land uses are required.

Sacramento-San Joaquin Delta Reform Act

In November 2009, the California Legislature enacted the Sacramento-San Joaquin Delta Reform Act (Delta Reform Act) (California Water Code Section 10610 et seq.), also known as SB 1 (Stats. 2009, 7th Ex. Sess., ch. 5) (SB X7-1), one of several bills passed at that time related to water supply reliability, ecosystem health, and the Delta. The Delta Reform Act created the Delta Stewardship Council (DSC), charged with developing and adopting the Delta Plan (see "Initiatives and Management Plans" in this section below for more information on the Delta Plan).

Under the Delta Reform Act, the DSC is charged with reviewing and advising local and regional agencies regarding the consistency of local and regional planning documents with the Delta Plan. The DSC's input includes reviewing the

consistency of local and regional plans with the ecosystem restoration needs of the Delta and whether the lands set aside for natural resource protection are sufficient to meet the Delta's ecosystem needs. The Delta Reform Act requires that "covered actions," which include plans, programs, or projects within the primary or secondary zones of the Delta, be consistent with the Delta Plan.

The Delta Reform Act expressly provides that "covered actions" do not include the following: (1) regional transportation plans (RTPs), such as this proposed 2025 Blueprint; and (2) plans, programs, projects, activities (and any infrastructure necessary to support those plans, programs, projects, or activities) within the secondary zone of the Delta that SACOG has determined is consistent with the proposed 2025 Blueprint (California Water Code Section 85057.5). However, the DSC reviews any plan that includes land within the Delta zones, whether or not it is a covered action. Metropolitan planning organizations that have a planning area crossing these boundaries are required to follow a consultation procedure with the DSC. This procedure includes early coordination to determine consistency of a proposed RTP with the Delta Plan.

Initiatives and Management Plans

California EcoRestore

California EcoRestore (EcoRestore) is a multi-agency initiative launched in 2015 to advance at least 30,000 acres of critical habitat restoration and enhancement in California's Central Valley including the Sacramento-San Joaquin Delta (Delta), Suisun Marsh, and Yolo Bypass region. EcoRestore and its partners pursue complex multi-benefit habitat restoration projects to deliver results (DWR n.d.). The EcoRestore initiative was built on the assertion that cutting-edge science, strong partnerships, and healthy impatience could drive more restoration than had ever been pursued in the Delta (DWR n.d.). The California Department of Water Resources (DWR) is a lead partner on most projects focused on implementing a comprehensive suite of habitat restoration actions to support the long-term health of the Delta and its native fish and wildlife species. After five years of work, DWR and its partners are within reach of doubling the Delta's restored and protected habitat lands.

Currently, EcoRestore includes 32 projects representing an investment of nearly $500 million to date. EcoRestore projects are funded by multiple sources, including the State Water Contractors through operation of the State Water Project, and funding allocated to restoration, multi-benefit, and flood needs through bonds, propositions, general fund, and other special funds. The overall estimated cost to complete the current list of 32 EcoRestore projects is $750-$950 million with approximately half from the State Water Project and half from other funding sources.

California's Wildlife Action Plan

In 2000, Congress enacted the State Wildlife Grants Program to support state programs that broadly benefit wildlife and habitats, particularly those addressing "species of greatest conservation need." As a requirement for receiving federal funds under this program, state wildlife agencies were required to submit a state wildlife action plan (SWAP) to USFWS by October 2005.

CDFW prepared a 2015 update of the California SWAP (CDFW 2015). SWAP 2015 is a comprehensive, statewide plan for conserving California's fish and wildlife and their vital natural habitats for future generations. SWAP 2015 focuses on conservation of wildlife resources in the nation's most biologically diverse state using an approach that is in harmony with a growing human population and the need for resilience in the face of a changing climate. SWAP 2015 is a flexible, scientifically grounded plan. It employs an ecosystem approach to conserve and manage diverse habitats and species and creates a blueprint for conservation actions to respond to the highest priorities of California's aquatic, marine, and terrestrial resources. It identifies priorities for conservation by regions and identifies specific strategies to achieve conservation goals.

Delta Plan

The Delta Plan (Delta Stewardship Council 2024) is a comprehensive, long-term management plan for the Delta that creates new rules and recommendations to further the state's coequal goals for the Delta: Improve statewide water supply reliability and protect and restore a vibrant and healthy Delta ecosystem, all in a manner that preserves, protects and enhances the unique agricultural, cultural, and recreational characteristics of the Delta. The Delta Plan

designates six priority habitat restoration areas (PHRAs) that have the greatest potential for large-scale habitat restoration. Two PHRAs are located partially or wholly within the plan area: the Yolo Bypass and the Cosumnes-Mokelumne Confluence. Delta Plan Policy ER P3 discourages projects that would preclude restoration in these areas.

LOCAL

Habitat Conservation Plans and Other Plans

A summary of the current habitat conservation plans (HCPs) and NCCPs in the plan area is provided below and the coverage of these plans is illustrated in Figure 3.4-1. The Yuba/Sutter Regional Conservation Plan is not active anymore. During implementation of specific projects, an activity subject to Section 10 of the ESA (16 USC Section 1531 et seq.) and considered a covered project under the implementing rules of an adopted HCP or NCCP may be able to participate in the HCP or NCCP to mitigate effects on covered species. In some of the HCP/NCCPs, the permit requirement for waters, wetlands, and streams under Section 404 and Section 401 of the CWA (33 USC Section 1251 et seq.) and section 1602 of the Fish and Game Code are included in the overall permitting process.

Placer County Conservation Program

On September 1, 2020, the Placer County Board of Supervisors adopted the Placer County Conservation Program (PCCP) (Placer County 2020). The goal of the PCCP is to provide an effective framework to protect, enhance, and restore the natural resources in specific areas of western Placer County, while streamlining environmental permitting for covered activities. The PCCP Plan Area encompasses approximately 201,000 acres in western Placer County and specific conservation activity areas in neighboring Sutter County, of which 50,000 to 60,000 acres would become part of a reserve system. The PCCP comprises three separate but complementary components, described below.

Western Placer County Habitat Conservation Plan and Natural Community Conservation Plan

The Western Placer County Habitat HCP/NCCP provides protection for fish, wildlife, and their habitats, and provides a regulatory compliance strategy for covered species under ESA and CESA. The Western Placer County HCP/NCCP includes 14 covered species: California black rail (*Laterallus jamaicensis coturniculus*), northwestern burrowing owl (*Athene cunicularia*), Swainson's hawk, tricolored blackbird (*Agelaius tricolor*), giant gartersnake (*Thamnophis gigas*), western pond turtle (*Actinemys marmorata*), California red-legged frog (*Rana draytonii*), foothill yellow-legged frog (*Rana boylii*), steelhead (*Oncorhynchus mykiss irideus*) Central Valley distinct population segment (DPS), Chinook salmon (*Onchorhynchus tshawytscha*) Central Valley fall/late fall-run, Conservancy fairy shrimp (*Branchinecta conservatio*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), vernal pool fairy shrimp (*Branchinecta lynchi*), and vernal pool tadpole shrimp (*Lepidurus packardii*).

The Western Placer County HCP/NCCP identifies conditions for avoidance, minimization, and mitigation (AMMs) to minimize impacts on natural communities (e.g., wetlands, vernal pools), riverine and riparian habitats, oak woodland, stream systems, and covered species. Participation in the Western Placer County HCP/NCCP includes payment of fees for land conversion and impacts on special habitats (e.g., vernal pools).

The PCCP indicates that barring major changes (e.g., changes to listing status of species, changes to CEQA statute or guidelines, new technologies), it is expected that future CEQA documents for activities that receive take coverage under the HCP/NCCP will incorporate the conservation measures by reference to comply with CEQA for the covered species and natural communities addressed in the HCP/NCCP. Since the PCCP was adopted in 2020, no such major changes have occurred that would inhibit the ability to rely on participation in the HCP/NCCP for CEQA-compliant mitigation.

The HCP/NCCP minimizes and mitigates impacts to Covered Species and natural communities, including aquatic natural communities and habitat, and provides for their conservation and management at a landscape-level scale. The PCCP will ultimately create a system of large, interconnected reserves that meet the goals and objectives for specific natural communities and for specific Covered Species.

Western Placer County Aquatic Resources Program

The Western Placer County Aquatic Resources Program (CARP) is a component of the PCCP that identifies, classifies, and protects aquatic resources within the PCCP Plan Area by providing a programmatic framework for applicants to obtain an authorization to affect aquatic resources. The CARP provides a multidisciplinary, programmatic approach to avoid, minimize, and mitigate impacts to aquatic resources, providing preferred avoidance, minimization, conservation, and mitigation at a larger landscape level, rather than on a project by project basis. The CARP classifies the various aquatic resources within the plan area that are under USACE, RWQCB, and CDFW regulatory authorities.

In May of 2021, USACE issued a regional general permit (RGP) for activities conducted under the Western Placer County In-Lieu Fee Program and covered by the Western Placer County HCP/NCCP that would result in the discharge of dredged and/or fill material in waters of the United States (USACE 2021). In October of 2020, the Central Valley RWQCB issued a General Order for California Water Code section 13263 General Waste Discharge Requirements (WDRs) and CWA Section 401 Water Quality Certification for the Western Placer County HCP/NCCP RGP (Central Valley RWQCB 2020).

The CARP has a number of additional conditions for work within the vicinity of drainages. These conditions apply to certain defined areas; those that are relevant to the project include:

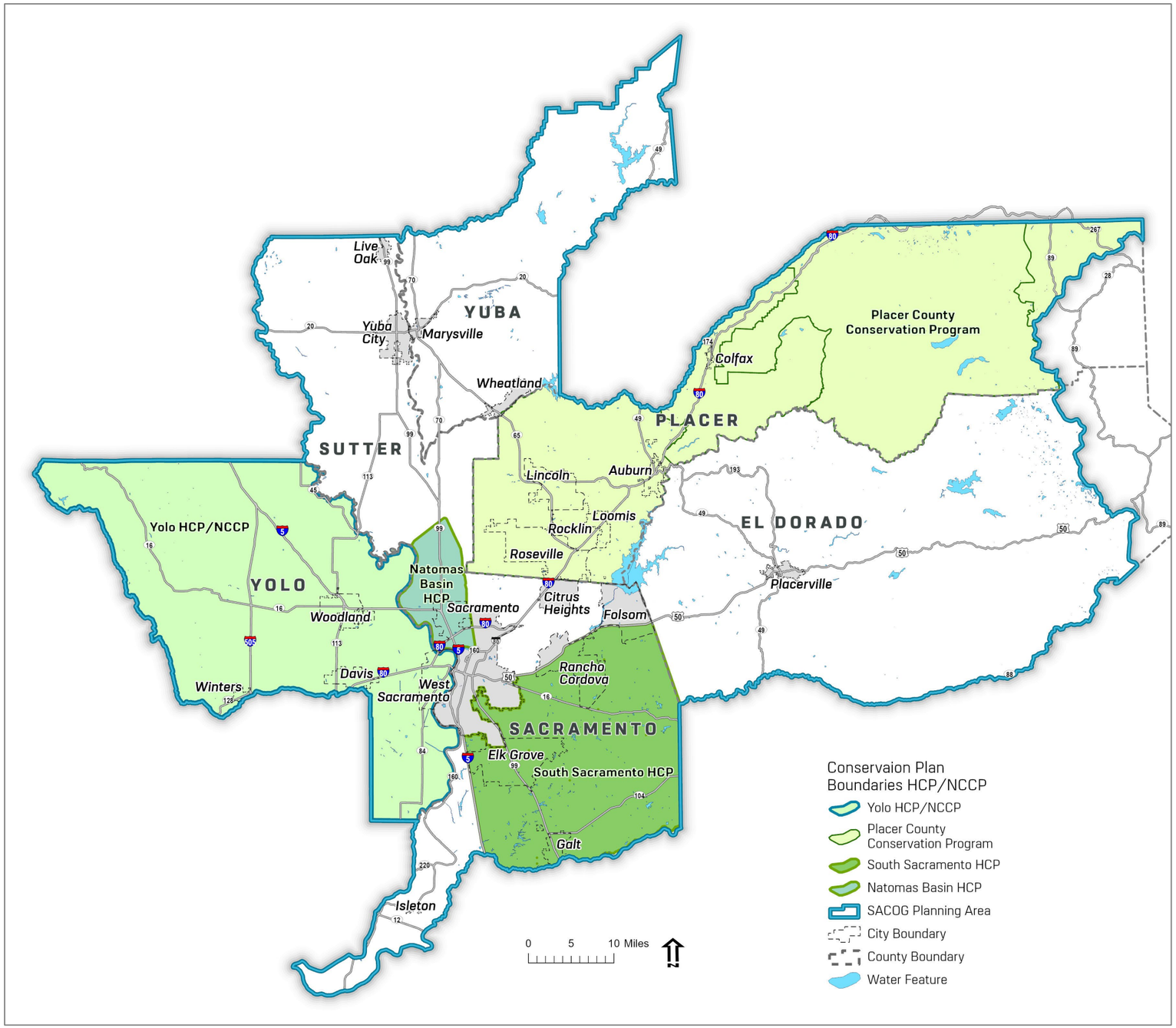
- Disturbance within 50 feet of the edge of riparian vegetation shall be limited to exempt activities such as bridge crossings, recreational trails, and outfalls.
- No structures are permitted within 50 feet of intermittent streams or within 100 feet of perennial streams unless authorized through an approved variance processed by Placer County. In addition, Placer County Code (Chapter 17.54.145) identifies a Watercourse Setback within which no structures are permitted except as approved by the planning director. This "Placer County Watercourse Setback" is defined as designated buffers for various named drainages, and 50-foot buffers for all other drainages in National Hydrology Dataset. There is a 300-foot setback from Dry Creek and a 50-foot setback from all other drainages.

Western Placer County In-Lieu Fee Program

The Western Placer County In-Lieu Fee (ILF) Program allows requirements under Section 404 of CWA to be fulfilled by payment of a fee for compensatory mitigation of impacts on aquatic resources from activities covered under the HCP/NCCP and the CARP. PCCP Development Fees include Land Conversion Fees, which are used to purchase and preserve land within the Reserve Acquisition Area (RAA), and Special Habitat Fees, which are collected for impacts to Aquatic Resources of Placer County. Special Habitat Fees are used to create, enhance, and restore aquatic resources within the RAA for both the HCP/NCCP and ILF Program.

Natomas Basin Habitat Conservation Plan

The Natomas Basin is a low-lying area of the Sacramento Valley located in the northern portion of Sacramento County and the southern portion of Sutter County. The Natomas Basin HCP was adopted in 1997 and revised in 2003, covering a 53,537-acre area interior to the toe of levees surrounding the Natomas Basin, located in the northern portion of Sacramento County and the southern portion of Sutter County (City of Sacramento et al. 2003). The Natomas Basin HCP has two permit holders consisting of the City of Sacramento and Sutter County. The Natomas Basin HCP covers 22 sensitive species, including 12 state- or federally-listed species. The covered species are included in Appendix C-2. The Natomas Basin Conservancy is a nonprofit entity that is responsible for implementing the Natomas Basin HCP's reserve acquisition and management activities and serves as the "Plan Operator," on behalf of the city, Sutter County, the Metro Air Park Property Owners' Association under the Metro Air Park HCP and other potential permittees.



Source: Prepared by SACOG in 2025.

Figure 3.4-1 Habitat Conservation Plans and Native Community Conservation Plans Boundaries in Plan Area

South Sacramento Habitat Conservation Plan

Pursuant to Section 10(a)(1)(B) of the ESA, the South Sacramento Habitat Conservation Plan (SSHCP) presents a regional approach to preserve federal and state endangered and threatened species and to streamline the existing development-permitting process in areas under development. The SSHCP, which was approved by Sacramento County in 2018, is a large-scale consolidated effort to protect and enhance wetlands (primarily vernal pools), aquatic, and upland habitats to provide ecologically viable conservation areas (County of Sacramento et al. 2018). The SSHCP covers 317,655 acres of south Sacramento County, California. The SSSHCP plan area includes portions of unincorporated Sacramento County, Galt, and the southern half of Rancho Cordova. Plan permittees consist of the County of Sacramento, City of Rancho Cordova, City of Galt, Sacramento County Water Agency, and Southeast Connector Joint Powers Authority. It will preserve natural lands in the County of Sacramento and protect habitat for 28 special-status plant and wildlife species, including 11 state and federally listed species, as well as two species proposed for federal listing, which are included in Appendix C-2. The boundary of the SSHCP was defined using political and ecological factors. The geographical boundaries are US Highway 50 to the north, the Sacramento River levee and County Road J11 (Walnut Grove-Thornton Road) to the west, the Sacramento County line with El Dorado and Amador Counties to the east, and the San Joaquin County line to the south. The SSHCP allows the County of Sacramento and cities of Sacramento, Rancho Cordova, and Galt to extend incidental take coverage to third parties.

Yolo Habitat Conservation Plan/Natural Communities Conservation Plan

The Yolo HCP/NCCP became effective January 11, 2019, and allows for the incidental take of specified species listed under the federal ESA and CESA, subject to conditions (Yolo Habitat Conservancy 2018). The HCP/NCCP is implemented by the Yolo Habitat Conservancy, a joint powers agency composed of Yolo County, and its four cities (Davis, West Sacramento, Woodland, and Winters). The HCP/NCCP planning area includes the entirety of Yolo County which is approximately 653,550 acres. The plan also includes conservation activities outside of Yolo County within an additional 1,174 acres along Putah Creek in Solano County. The plan provides coverage for 12 species, consisting of nine state- and/or federally listed species, one species that is fully protected in California, one that is proposed for federal listing, and one that is a candidate for state listing, the last two of which could become listed during the 50-year term of the plan. The covered species are included in Appendix C-2.

El Dorado County General Plan Biological Resources Policy Update and Oak Resources Management Plan

The El Dorado County Board of Supervisors adopted the Biological Resources Policy Update and Oak Resources Management Plan (ORMP) in October 2017 (El Dorado County 2020). The Biological Resources Policy Update included revisions to the General Plan objectives, policies, and implementation measures to establish a comprehensive Biological Resource Mitigation Program. The objective of this program is to conserve special-status species habitat, aquatic habitat, wetland and riparian habitat, habitat for migratory deer herds, and large expanses of native vegetation. The ORMP updated and revised the existing Oak Woodland Management Plan and now defines mitigation requirements for impacts on oak woodlands, individual native oak trees, and heritage trees; and also outlines El Dorado County's strategy for oak resource management and conservation. The ORMP establishes an in-lieu fee payment option for impacts on oak woodlands and oak trees and identifies Priority Conservation Areas where oak woodland conservation efforts will be focused.

Ordinances

Native and Heritage Tree Ordinances

Most counties and numerous cities within the plan area have adopted general plan policies, and in some cases adopted ordinances, to protect native and/or heritage trees, or encourage preservation of trees in public areas and protection of sensitive species. These include the Placer County Tree Ordinance (Article 12.14 & 12.20), Placer County Woodland Conservation Ordinance (Article 19.50), Sacramento County Tree Preservation and Protection Ordinance (Chapter 19.12), Yolo County Code (including Section 6-22.307 & Section 8-1.806) and general plan policies including in the El Dorado County General Plan Conservation and Open Space Element, Sacramento County General Plan Land Use and Open Space Elements, Sutter County Environmental Resources Chapter, Yolo County General Plan, and Yuba County General Plan Conservation Element. Most policies and ordinances require project applicants to obtain a tree

removal permit and compensate for the removal of protected trees. These plans, ordinances, and policies are applicable to specific project approvals. Yolo County also has an Oak Woodland Conservation and Enhancement Plan, although the plan is voluntary.

General Plans

Local planning policies related to biological resources are also established in each jurisdiction's general plan. In general, jurisdictions may have policies in place that establish conservation areas; preserve ecological function; encourage wildlife-friendly development or operating practices; support native species; or address impacts on plants, fish, or wildlife; special-status species; oak woodland; or other habitat preservation (e.g., riparian, wetland, forest).

SB 1425 and AB 1889

Senate Bill 1425 (2022) added Section 65565.5 to the Government Code on September 30, 2022. This law requires all cities and counties to review and update the open space element of their general plans by January 1, 2026, to address three specific topics:

- Equitable access to open space for all residents, correlated with the environmental justice element
- Climate resilience and other co-benefits of open space, correlated with the safety element
- Rewilding opportunities, as defined, correlated with the land use element

AB 1889 (2024), also known as the "Room to Roam Act" amended Section 65302 of the Government Code to require cities and counties to review and update the conservation element of their general plans in the next adoption or revision of one or more elements on or after January 1, 2028, to:

- identify and analyze connectivity areas, permeability, and natural landscape areas within the jurisdiction;
- identify and analyze existing or planned wildlife passage features to ensure that planned development does not undermine their effectiveness;
- consider the impacts of development and the barriers caused by development to wildlife and habitat connectivity;
- avoid, minimize, or mitigate impacts and barriers to wildlife movement to the extent feasible; and
- analyze and consider opportunities to remediate existing barriers to wildlife connectivity and restore degraded habitat and open space.

While SB 1425 and AB 1889 have different requirements for open space and conservation elements, both laws address the management of open space and there are many similarities in the requirements for rewilding and habitat connectivity.

3.4.2 Environmental Setting

As outlined in Chapter 2, "Project Description," the plan area consists of El Dorado County, Placer County, Yuba County, Sutter County, Yolo County, and Sacramento County (see Figure 2-1). This environmental setting section contains information regarding the following biological resources:

- land cover types and associated biological habitat uses,
- aquatic habitats,
- special-status species,
- critical habitat,
- sensitive natural communities and other sensitive habitats,
- invasive wildlife and plant species and noxious weeds,

- wildlife movement corridors,
- native wildlife nursery sites, and
- habitat conservation plans.

LAND COVER TYPES AND ASSOCIATED HABITAT USES AND VALUES

Information about the locations and distribution of land cover types in the plan area was compiled using data from CAL FIRE's Vegetation and Land Cover data from the Fire and Resource Assessment Program (FRAP) (CAL FIRE 2022). The FRAP vegetation layer is developed from various data sets representing the best available land cover data for each area of the state. *A Guide to the Wildlife Habitats of California* was utilized to inform descriptions of these vegetation communities and land cover types, which are described below (Mayer and Laudenslayer 1988).

For the purposes of this program-level document, land cover data were grouped into general land cover types within four broad categories: wildlands, aquatic, agriculture, and developed. These general land cover types are shown on Figure 3.4-2. Accordingly, the land cover type descriptions presented below are intended to provide regional-scale, general information about the plan area. Table 3.4-1 provides the acreages of each of these cover types by county and in total.

Table 3.4-1 Land Cover Types and Acreages by County in the Plan Area

Land Cover Type	El Dorado	Placer	Sacramento	Sutter	Yolo	Yuba	Total
Wildland Land Cover							
Conifer	443,331	404,788	–	4	–	74,839	**922,962**
Grassland	91,834	72,467	160,054	32,789	212	74,115	**431,472**
Hardwood	175,409	99,463	1,713	2,338	86,218	20,876	**386,017**
Oak Woodland	114,023	52,349	9,457	10,405	63,654	68,509	**318,397**
Chaparral	54,181	17,324	4	687	42,829	4,419	**119,444**
Riparian	5,588	13,487	22,111	13,076	13,624	11,647	**79,533**
Montane Hardwood-Conifer	31,771	31,026	–	–	–	11,819	**74,616**
Barren	26,083	9,070	1,228	112	1,673	4,604	**42,769**
Shrub/Scrub	123	2,820	325	–	201	66	**3,534**
Total Wildland	**942,342**	**702,794**	**194,891**	**59,411**	**208,412**	**270,894**	**2,378,744**
Aquatic Land Cover							
Water	15,937	11,703	21,130	7,040	10,449	11,268	**77,527**
Wetland	2,551	4,431	12,447	15,050	23,296	4,894	**62,670**
Total Aquatic	**18,488**	**16,134**	**33,577**	**22,090**	**33,746**	**16,162**	**140,197**
Agriculture Land Cover							
Row and Field Crops	3,632	28,640	121,931	77,694	208,435	20,401	**460,733**
Rice	–	14,928	9,387	119,213	35,804	39,726	**219,058**
Orchards and Vineyards	2,213	9,379	58,366	88,633	112,698	38,260	**309,548**
Pasture / Open Field	257	2,795	310	–	151	1,873	**5,386**
Total Agriculture	**6,101**	**55,743**	**189,994**	**285,540**	**357,088**	**100,260**	**994,726**

Land Cover Type	El Dorado	Placer	Sacramento	Sutter	Yolo	Yuba	Total
Developed Land Cover							
Urban	36,846	88,139	218,736	22,269	35,961	24,531	426,482
Total Developed	**36,846**	**88,139**	**218,736**	**22,269**	**35,961**	**24,531**	**426,482**
Total Land Cover	**1,003,778**	**862,810**	**637,198**	**389,310**	**635,206**	**411,847**	**3,940,149**

Notes: totals may not sum exactly due to independent rounding.

Source: Downloaded from CAL FIRE in 2024; compiled by SACOG in 2025.

Wildland

The wildland land cover group consists of the following cover types: conifer, grassland, hardwood, oak woodland, chaparral, riparian, montane hardwood, barren, and shrub/scrub.

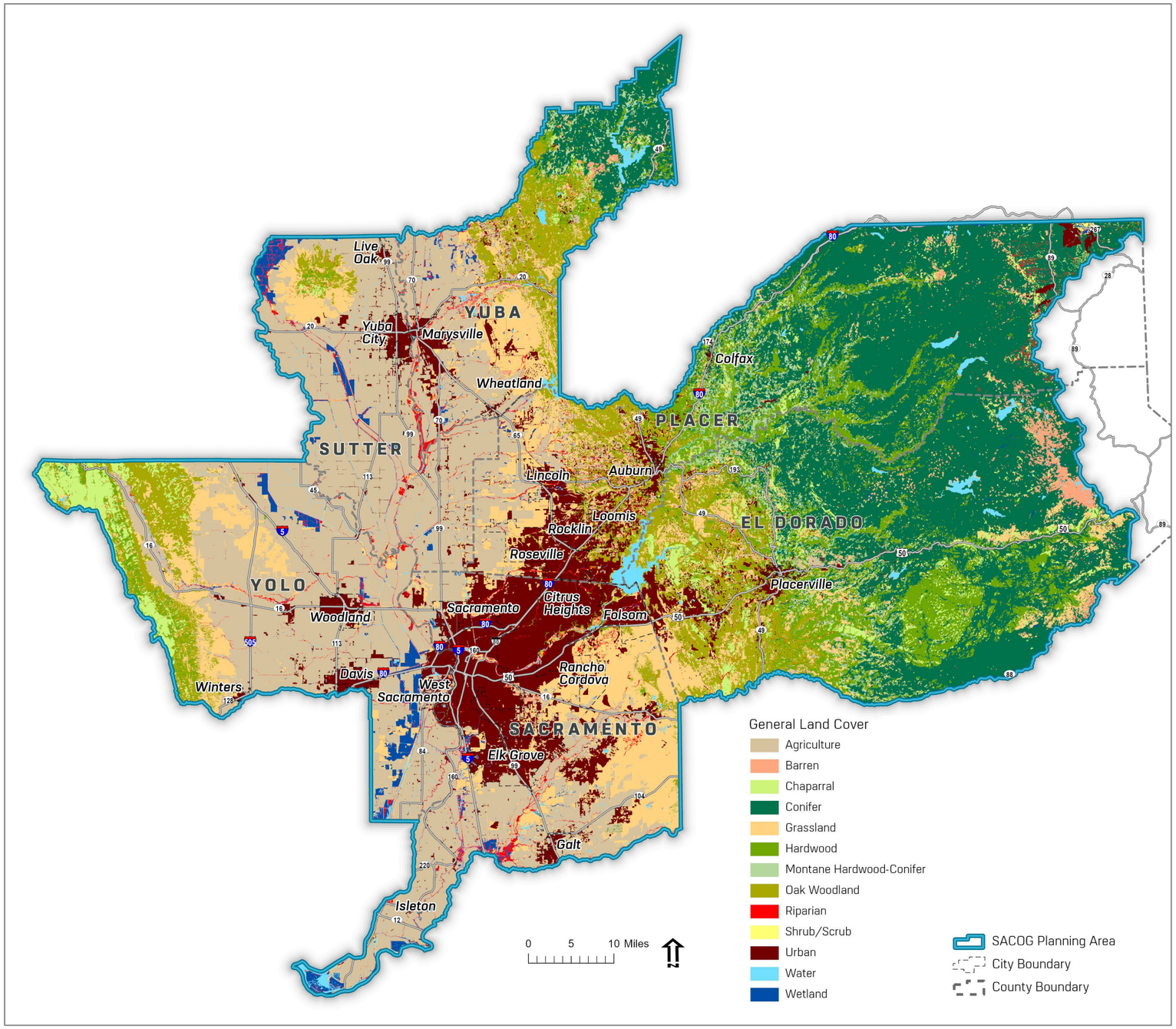
Conifer

Conifer forest and woodland communities within the plan area occur in the Sierra Nevada foothill and mountainous regions of Placer, El Dorado, and Yuba counties and consist of closed-cone pine-cypress, Douglas-fir, eastside pine, Jeffrey pine, juniper, lodgepole pine, ponderosa pine, red fir, Sierran Mixed Conifer, Subalpine Conifer, and White Fir CWHR Types. These communities are dominated by a mix of pines (*Pinus* spp.), California black oak (*Quercus kelloggii*), California red fir (*Abies magnifica*), white fir (*Abies concolor*), incense cedar (*Calocedrus decurrens*), quaking aspen (*Populus tremuloides*), Douglas-fir (*Pseudotsuga menziesii* var. *menziesii*), juniper (*Juniperus* spp.), and Pacific madrone (*Arbutus menziesii*). Species composition in the understory of the conifer forest and woodland communities varies widely with elevation, slope aspect, and fire history of individual stands; however, in most of the forested areas, the shrub and herbaceous layers occur primarily at forest edges or in canopy openings, such as rock outcrops and other natural or artificial clearings.

Large mammals frequent conifer forest and woodland communities, including coyote (*Canis latrans*), black bear (*Ursus americanus*), mountain lion (*Puma concolor*), and bobcat (*Lynx rufus*). A variety of smaller rodents, squirrels, and shrews are found in shrub thickets and open patches within conifer forest and woodlands. Amphibians and reptiles that occur in these communities include Sierra newt (*Taricha sierrae*), southern long-toed salamander (*Ambystoma macrodactylum sigillatum*), Sierran treefrog (*Pseudacris sierra*), California toad (*Anaxyrus boreas halophilus*), Sierra alligator lizard (*Elgaria coerulea palmeri*), and California kingsnake (*Lampropeltis californiae*).

A variety of flycatchers, vireos, warblers, and many other birds occur in conifer forest and woodland communities. Canopy-dwelling species include olive-sided flycatcher (*Contopus cooperi*), golden-crowned kinglet (*Regulus satrapa*), and western tanager (*Piranga ludoviciana*). Large snags and the decaying portions of living trees offer nesting cavities for species including pileated woodpecker (*Drycopus pileatus*) and western screech owl (*Megascops kennicottii*). The conifer forest and woodland communities also provide food and habitat for a variety of birds, including white-headed woodpecker (*Dryobates albolarvatus*), white-breasted nuthatch (*Sitta carolinensis*), red-breasted nuthatch (*Sitta canadensis*), chestnut-backed chickadee (*Poecile rufescens*), and black-headed grosbeak (*Pheucticus melanocephalus*).

Special-status species that are known to occur in these vegetation communities include northwestern pond turtle (*Actinemys marmorata*), Sierra Nevada yellow-legged frog (*Rana sierrae*), American goshawk (*Accipiter atricapillus*), California spotted owl (*Strix occidentalis occidentalis*), great gray owl (*Strix nebulosa*), yellow warbler (*Setophaga petechia*), fisher (*Pekania pennanti*), northern California ringtail (*Bassariscus astutus raptor*), and bat species including pallid bat (*Antrozous pallidus*) and spotted bat (*Euderma maculatum*). Special-status plant species that could occur in this vegetation community are listed in Appendix C-2.



Source: Prepared by SACOG in 2025.

Figure 3.4-2 General Land Cover in Plan Area

Grassland

Within the plan area, the two types of grassland are annual grassland and perennial grassland. Grassland is the second most common wildland vegetation community in the plan area. Annual grasslands are found on ridges, hill slopes, and valley floors and are dominated by nonnative annual grasses, and both native and nonnative forbs. Representative species include a mix of dominant nonnative grasses such as soft chess (*Bromus hordeaceus*), foxtail chess (*Bromus madritensis*), ripgut grass (*Bromus diandrus*), wild oat (*Avena fatua*), and tall fescue (*Festuca arundinacea*), intermixed with native and nonnative forb species such as clover (*Trifolium* spp.), lupine (*Lupinus* spp.), owl's clover (*Castilleja* spp.), poppy (*Eschscholzia* spp.), and filaree (*Erodium* spp.). Some annual grasslands in the plan area are subject to frequent disturbance, such as livestock grazing and maintenance activities along roadsides, and in these areas, the vegetation community is often dominated by introduced nonnative species, such as yellow star-thistle (*Centaurea solstitialis*). Perennial grassland is dominated by native relic stands of perennial bunchgrasses in the valley and foothills or dry meadows in the higher elevations. Perennial grasslands are characterized by grasses such as needlegrass (*Stip*a spp.), melic (*Melica* spp.), secund bluegrass (*Poa secunda*), beardless wild-rye (*Elymus triticoides*), Idaho fescue (*Festuca idahoensis*), hair grass (*Deschampsia* spp.), bent grass (*Agrostis* spp.), reed grass (*Calamagrostis* spp.), and native forbs.

Grasslands in the plan area support insects, amphibians, reptiles, small birds, and small mammals, and in turn support wildlife species that prey on these species, including red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus hudsonius*), American kestrel (*Falco sparverius*), and coyote. Special-status wildlife species that use grassland habitat include American badger (*Taxidea taxus*), burrowing owl (*Athene cunicularia*), white-tailed kite (*Elanus leucurus*), and Swainson's hawk (*Buteo swainsoni*). Grasslands that support vernal pools or seasonal wetlands provide habitat for many endemic and special-status species including vernal pool invertebrates, western spadefoot (*Spea hammondii*), and California tiger salamander (*Ambystoma californiense*). Special-status plants that could occur in grassland habitats are listed in Appendix C-2.

Hardwood

Hardwood vegetation communities in the plan area consist of aspen, eucalyptus, and montane hardwood. These communities typically occur at different elevations of the plan area. Aspen stands in the plan area occur primarily at higher elevations near seeps, streams, and meadows in the Sierra Nevada. Aspen stands are typically dominated by quaking aspen. Associated subdominant tree species may include willows (*Salix* spp.), alders (*Alnus* spp.), black cottonwood (*Populus trichocarpa*), Jeffrey pine (*Pinus jeffreyi*), ponderosa pine (*Pinus ponderosa*), California red fir, white fir, and Douglas-fir. Important understory shrubs include sagebrush (*Artemisia* spp.) and snowberry (*Symphoricarpos albus* var. *laevigatus*). Forbs are usually more abundant than grasses and sedges, and the herbaceous component of the vegetation community is typically rich and diverse. Although no wildlife species is totally dependent on habitats dominated by aspen, these stands provide habitat favored by a variety of cavity-nesting birds, such as bluebirds (*Sialia* spp.), sapsuckers (*Sphyrapicus* spp.), and downy woodpeckers (*Dryobates pubescens*).

Eucalyptus (*Eucalyptus* spp.) is the dominant species in the eucalyptus vegetation community, which is a nonnative tree species that has been extensively planted throughout the state. As such, this vegetation community is found in locations with highly variable site characteristics. Generally, though, eucalyptus groves are found on relatively flat or gently rolling terrain, occasionally in the foothills of the plan area, usually at elevations below 1,500 feet, but they have been found up 2,100 feet in elevation. Overstory composition is typically limited to one species of the genus, or mixed stands composed of other species of the same genus and few native overstory species are present within eucalyptus groves. Wildlife species that can be found in this vegetation community include western barn owl (*Tyto alba*), red-tailed hawk, and red-shouldered hawk (*Buteo lineatus*). Eucalyptus provides important roosts, perches, and nest sites for a number of bird species, particularly raptors. Eucalyptus trees with stringy bark or a tendency for rapid deposition of litter, create micro habitats for small vertebrate species, including alligator lizard, gopher snake, and woodrat.

Montane hardwood vegetation communities in the plan area are typically west of the Cascade-Sierra Nevada crest, though can be found east of the crest in localized areas of Placer and El Dorado counties. In the Sierra Nevada range, steep, rocky south slopes of major river canyons often have extensive populations of canyon live oak (*Quercus chrysolepis*) with scattered old-growth Douglas-fir. Elsewhere, higher elevation montane hardwood overstory

associates are typically a mix of conifer species and California black oak and lower elevation associates include foothill pine (*Pinus sabiniana*), knobcone pine (*Pinus attenuata*), and tan oak (*Notholithocarpus densiflorus*). Associated understory vegetation includes wood rose (*Rosa gymnocarpa*), manzanita (*Arctostaphylos* spp.), western poison oak (*Toxicodendron diversilobum*), and sparse cover of forbs and grasses. Wildlife species characteristic of this vegetation community include disseminators of acorns (scrub and Steller's jays [*Cyanocitta stelleri*], acorn woodpecker [*Melanerpes formicivorus*], and western gray squirrel [*Sciurus griseus*]) as well as those that utilize acorns as a major food source including mountain quail (*Oreortyx pictus*), California ground squirrel (*Spermophilus beecheyi*), California quail (*Callipepla californica*), black bear, and mule deer (*Odocoileus hemionus*). In addition, many amphibians and reptiles are found in montane hardwood communities including ensatina (*Ensatina eschscholtzii*), western fence lizard (*Sceloporus occidentalis*), northern sagebrush lizard (*Sceloporus graciosus graciosus*), and western rattlesnake (*Crotalus oreganus*).

Oak Woodland

Oak woodlands in the plan area consist of blue oak woodland, blue oak-foothill pine, interior oak woodland, and valley oak woodland. Blue oak woodland generally has an overstory of scattered trees although the canopy can be nearly closed on better quality sites. The tree canopy is dominated by blue oak (*Quercus douglasii*), commonly forming open savanna-like stands on dry ridges and gentle slopes. Shrubs are often present but rarely extensive, often occurring on rock outcrops. The understory is typically composed of an extension of annual grassland vegetation. Many wildlife species can be found within blue oak woodland in the plan area, including wildlife species that use acorns as a food source, which include Steller's jay, acorn woodpecker, California quail, western gray squirrel, black bear, and mule deer. The blue oak-foothill pine vegetation community has an overstory dominated by blue oak and foothill pine, and other species can include interior live oak (*Quercus wislizeni*), California buckeye (*Aesculus californica*), ceanothus (*Ceanothus* spp.), and manzanita. Wildlife associations are similar to montane hardwood and blue oak woodland communities in the plan area.

Interior live oak woodland composition is extremely variable, but interior live oak is dominant or codominant with other deciduous and evergreen hardwoods (mostly other oaks [*Quercus* spp.]), sometimes mixed with scattered conifers. Many wildlife species can be found within coastal oak woodland in the plan area, including wildlife species that use acorns as a food source, which include Steller's jay, acorn woodpecker, California quail, western gray squirrel, black bear, and other wildlife species mentioned above for other oak woodlands and montane hardwood vegetation communities.

Valley oak woodland varies from a savanna-like structure to forest-like stands with partially closed canopies, composed mostly of winter-deciduous, broad-leaved species. Denser stands typically grow in valley soils along natural drainages. Canopies of these woodlands are dominated almost exclusively by valley oak (*Quercus lobata*), and tree associates in the Central Valley include western sycamore (*Platanus racemosa*), interior live oak, box elder (*Acer negundo*), and blue oak. Many wildlife species can be found within valley oak woodland in the plan area, including wildlife species that use acorns as a food source, which include Steller's jay, acorn woodpecker, California quail, western gray squirrel, black bear, and other wildlife species mentioned above for other oak woodlands and montane hardwood vegetation communities. Special-status plants that could occur in oak woodlands are listed in Appendix C-2.

Chaparral

Chaparral vegetation communities in the plan area typically occur on the drier slopes of foothills and are characterized by drought-resistant shrubs consisting of chamise-redshank chaparral, mixed chaparral, and montane chapparal. Dominant species in chaparral communities of the plan area include manzanita (*Arctostaphylos* spp.), buckbrush (*Ceanothus cuneatus* var. *cuneatus*), inland scrub oak (*Quercus berberidifolia*), leather oak (*Quercus durata*), and chamise (*Adenostoma fasciculatum*). The herbaceous understory varies depending on the density of shrub cover and typically includes nonnative and native grasses and forbs.

Some stands of chaparral may consist of nearly pure stands of chamise, with few other shrubs. The purest stands of chamise occur on xeric, south-facing slopes. Toyon (*Heteromeles arbutifolia*), western poison oak, spiny redberry (*Rhamnus crocea*), and California coffee berry (*Frangula californica*) are commonly found in drainage channels and on other relatively mesic sites. At upper elevations or on more mesic exposures, chamise mixes with ceanothus, manzanita, and scrub oak.

Mixed chaparral is a floristically rich type that supports approximately 240 species of woody plants. Dominant species in cismontane mixed chaparral include inland scrub oak, and several species of ceanothus and manzanita. Individual sites may support pure stands of these shrubs or diverse mixtures of several species. Commonly associated shrubs include chamise, birchleaf mountain mahogany (*Cercocarpus betuloides*), toyon, California yerba santa (*Eriodictyon californicum*), California buckeye, California coffee berry, and California flannelbush (*Fremontodendron californicum*). In the plan area, this habitat type occurs along middle and lower elevations of the western slope of the Sierra Nevada.

Montane chaparral varies markedly throughout California. Species composition changes with elevational and geographical range, soil type, and aspect. One or more of the following species usually characterize montane chaparral communities: snowbrush (*Ceanothus velutinus*), greenleaf manzanita (*Arctostaphylos patula*), pinemat manzanita (*Arctostaphylos nevadensis*), bush chinquapin (*Chrysolepis sempervirens*), and toyon. Following fire, herbaceous plants may dominate for up to 5 years. Usually within 7 to 9 years the shrub overstory is fully developed. Montane chaparral occurs in the Sierra Nevada in the plan area. Montane chaparral provides habitat for a wide variety of wildlife including numerous rodents species as well as deer and other herbivores. Some small herbivores use chaparral species in fall and winter for food and habitat when grasses are not in abundance. Rabbits and hares, as well as many other species, are found in chaparral communities. In addition, many birds find a variety of habitat needs in the montane chaparral including seeds, fruits, insects, protection from predators and climate, as well as singing, roosting, and nesting sites. Mixed chaparral and chamise-red shank chaparral share some of the same wildlife species types that utilize montane chaparral.

Riparian

Riparian land cover types occur along creeks, rivers, and other water bodies in the plan area and consist of montane riparian and valley foothill riparian. Riparian habitat typically includes some mix of willow, cottonwood (*Populus fremontii* ssp. *fremontii, P. trichocarpa*), valley oak, western sycamore, box elder, ash (*Fraxinus latifolia, F. dipetala*), alder (*Alnus rhombifolia, A. incana*), and California wild grape (*Vitis californica*). The shrub layer of riparian areas is typically highly variable and can range from sparse to well developed. The herbaceous understory of riparian areas typically contains a mixture of sedges (*Carex* spp.), rushes (*Juncus* spp.), and other native and introduced species of grasses and forbs.

Much of the historic riparian habitat in California has been lost due to urbanization, flood control practices, agricultural conversion, and livestock grazing. The remaining riparian habitats in the state are used by a large variety of wildlife species. For this reason, and because of the relative scarcity of this habitat in the state, CDFW has designated riparian habitat as a sensitive habitat. Riparian habitat supports abundant aquatic and terrestrial invertebrates that are prey for amphibians and reptiles, such as valley garter snake (*Thamnophis sirtalis fitchi*) and coral-bellied ring-necked snake (*Diadophis punctatus pulchellus*), as well as insectivorous birds, such as warblers, northern flicker (*Colaptes auratus*), downy woodpecker, and flycatchers. Small mammals found in riparian habitats include shrews, voles, bats, and mice. Raptors that nest in large riparian trees include great horned owl (*Bubo virginanus*), red-tailed hawk, Cooper's hawk (*Accipiter cooperii*), and American kestrel. Other wildlife species that utilize riparian areas include striped skunk (*Mephitis mephitis*), Sacramento Valley red fox (*Vulpes vulpes patwin*), and American badger, who forage in riparian habitats and use them for cover and travel.

Elderberry shrubs within riparian woodlands in the plan area provide habitat for the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). Similarly, dense areas of the riparian woodland could provide nesting habitat for the western yellow-billed cuckoo (*Coccyzus americanus occidentalis*). Both species are listed as federally threatened. Riparian woodlands also provide nesting habitat for several special-status raptors, including osprey (*Pandion haliaetus*), bald eagle (*Haliaeetus leucocephalus*), Swainson's hawk, and white-tailed kite. Cavities or exfoliating bark in riparian trees along waterways in the plan area may be used as roosting sites by some species of special-status bats, including pallid bat. Special-status plants that could occur in riparian woodlands are listed in Appendix C-2.

Montane Hardwood-Conifer

Montane hardwood-conifer vegetation communities contain at least one-third conifer and one-third broad-leaved hardwood trees. Species assemblages often include ponderosa pine, Douglas-fir, incense cedar, California black oak,

tan oak, Pacific madrone, and Oregon oak (*Quercus garryana*). Species assemblages likely vary widely depending on location within the plan area. In the Sierra Nevada, the typical elevation range for this vegetation community is 1,000 to 4,000 feet. Montane hardwood-conifer communities provide habitat for a variety of wildlife species. Mature forests are valuable to cavity nesting birds. Further, mast (i.e., fruits of forest trees and shrubs) crops are an important food source for many birds as well as mammals.

Barren

Barren areas are defined by the absence of vegetation and are any community with less than 2 percent total vegetation cover and less than 10 percent cover by tree or shrub species. Barren habitat can include rocky outcroppings, riverbanks, or canyon walls. Structure and composition of the substrate is largely determined by the region of the state and surrounding environment.

Shrub/Scrub

Shrub/scrub land cover within the plan area consist of alpine-dwarf shrub, bitterbrush, low sage, and sagebrush. These communities are characterized by typically low-growing shrubs that have varying canopy density. Although generally dominated by shrubs, small trees and herbaceous annual species may also occur in these shrub/scrub areas.

Alpine dwarf-scrub vegetation communities typically include grasses, sedges, and forb communities with a mixture of dwarf-shrubs (often low-growing, mat-forming plants). Species composition of alpine dwarf-scrub varies considerably throughout California. The most common shrubs occurring are oceanspray (*Holodiscus discolor*), Greene's goldenbush (*Ericameria greenei*), and white heather (*Cassiope mertensiana*). These shrubs occur primarily in northern California including in the Sierra Nevada. Herbaceous species that commonly occur in the alpine areas of northern California, including in the Sierra Nevada, include sun cup (*Camissonia* spp.), sedges, bluegrass (*Poa* spp.), wild buckwheat (*Eriogonum* spp.), rockcress (*Arabis* spp.), and pussypaws (*Calyptridium* spp.).

Bitterbrush (*Purshia tridentata*) is only occasionally found in pure stands. Understory herbaceous plants vary greatly in composition and density. The elevation range of bitterbrush varies with latitude, exposure, soil, and precipitation. Bitterbrush can be codominant with big sagebrush (*Artemisia tridentata*) or rubber rabbitbrush (*Ericameria nauseosa*). Overstory species found can include ponderosa or Jeffrey pine or western juniper (*Juniperus occidentalis*), but trees comprise less than 10 percent canopy cover.

Low sage scrub habitat may be dominated by low sagebrush (*Artemisia arbuscula*), often in association with yellow rabbitbrush (*Chrysothamnus viscidiflorus*), bitterbrush, or big sagebrush. Common grass species include secund bluegrass and bottlebrush squirreltail (*Elymus elymoides*), and Idaho fescue.

Sagebrush stands are typically large, open, discontinuous stands of big sagebrush of fairly uniform height. Sagebrush occurs at a wide range of middle and high elevations. Often the habitat is composed of pure stands of big sagebrush, but many stands include other species including rabbitbrush and bitterbrush. In communities not fully occupied by sagebrush, various amounts of herbaceous understory are found. Common grass species include Idaho fescue and several species of needlegrass.

Shrub and scrub vegetation communities provide foraging, nesting, and roosting habitat, as well as cover for a variety of wildlife species such as black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Otospermophilus beecheyi*), sparrows, and hawks. Special-status species that can occur in this habitat include the western white-tailed jackrabbit (*Lepus townsendii townsendii*) and burrowing owl. Special-status plants that could occur in scrub habitat are listed in Appendix C-2.

Aquatic

The aquatic land cover group consists of the following cover types: water and wetland.

Water

Water mapped in the plan area consists of estuary waters, lakes (including reservoirs), and rivers. In addition, due to mapping limitations when using aerial and satellite imagery, more water features likely occur within the plan area

than were captured in the land cover mapping, so these features would need to be analyzed on a project by project basis. The plan area contains several lakes, reservoirs, and flood control basins, including Folsom Lake, Rollins Reservoir, Sugar Pine Reservoir, New Bullards Bar Reservoir, Collins Lake, and Camp Far West Reservoir. There are many other small reservoirs, lakes, and ponds throughout each of the counties. Many of these large water bodies support perennial and seasonal wetland and riparian communities along their edges.

Lakes and reservoirs (i.e., lacustrine systems) provide habitat for a variety of waterfowl, including geese, mallard (*Anas platyrhynchos*), cinnamon teal (*Spatula cyanoptera*), American wigeon (*Mareca americana*), and provide important resting and foraging habitat for many waterfowl species during migration. Vegetation growing along the edges of water bodies also provides nesting habitat for several bird species and foraging and refuge habitat for numerous amphibian, reptile, and mammal species occupying the water and adjacent grassland, woodland, and forest habitats.

Riverine systems in the plan area comprise perennial, intermittent, and ephemeral drainages, including human-made canals and irrigation ditches. Most of the rivers in the plan area and their tributaries are part of the Sacramento–San Joaquin River watershed. This includes streams and creeks, as well as associated gravel and sand bars. A variety of invertebrate and vertebrate species exist in riverine ecosystems in the plan area.

Fish-eating birds, such as osprey and bald eagle, forage for fish near the surface of pools and shallow waters along lakes and rivers. Belted kingfisher (*Megaceryle alcyon*), double-crested cormorant (*Phalacrocorax auritis*), and common mergansers (*Mergus merganser*) also forage for fish in streams and reservoirs. Many amphibians and reptiles depend on lacustrine and riverine systems; these include California toad, foothill yellow-legged frog (*Rana boylii*), garter snake (*Thamnophis* spp.), and northwestern pond turtle. Mammals in riverine systems include north American river otter (*Lontra canadensis*), American mink (*Neovison vison*), and north American beaver (*Castor canadensis*). Emerging aquatic insects are a major food source for many bat species that forage over open waters in the plan area.

Low-elevation rivers and large, perennial creeks support runs of Chinook salmon (*Oncorhynchus tshawytscha*) and steelhead (*Oncorhynchus mykiss irideus*). Other native fish species include green sturgeon (*Acipenser medirostris*), Sacramento perch (*Archoplites interruptus*), and Sacramento splittail (*Pogonichthys macrolepidotus*). Appendix C-2 presents a list of special-status fish that are known or have the potential to occur in the plan area.

Wetland

The plan area contains a variety of wetland communities consisting of fresh emergent wetlands, saline emergent wetlands, and wet meadows. Wetlands are ecologically productive habitats that support a rich variety of both plants and wildlife. Common types of wetlands in the plan area include vernal pools, which are being lost increasingly as a result of conversion of land to other uses. Priorities of the South Sacramento HCP and Placer County Conservation Plan are to conserve and protect remaining vernal pool complexes.

Wetlands may be subject to state and/or federal regulations. In addition, due to mapping limitations when using aerial and satellite imagery and the dynamic nature and complexity of wetland systems, more wetlands likely occur in the plan area than were captured in the land cover mapping, so these features will need to be analyzed on a project by project basis. Compliance with regulations for wetlands and other waters in the plan area would be required for projects involving filling of or encroachment into these habitats. USACE and the US Environmental Protection Agency (EPA) define wetlands as areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (40 CFR Section 232.2). This definition is referred to as a three-parameter definition because positive indicators of all three wetland criteria (vegetation, soils, and hydrology) must be present. Areas identified as other waters typically lack positive indicators of one or more wetland criteria. Other waters that occur in the plan area include streams, creeks, rivers, irrigation canals, reservoirs, and ponds, and are reviewed above in the "Water" section.

Seasonal wetlands in the plan area are typically shallow depressions that frequently occur in grasslands and are filled during the rainy season. Some maintain water through the spring or early summer. Vernal pools in the plan area are a type of seasonal wetland characterized by the presence of an impermeable hardpan layer, a unique hydrologic

cycle, and a plant community adapted to conditions within vernal pools. Vernal pools provide habitat for numerous plant, vertebrate, and invertebrate species, many of which are endemic to vernal pools.

Seasonal wetlands, including vernal pools and seasonal swales, provide habitat for a variety of wildlife species. During the wet season when seasonal wetlands and vernal pools are ponded, avian species including great egret (*Ardea alba*) and greater yellowlegs (*Tringa melanoleuca*) commonly forage on invertebrate and amphibian larvae found in this habitat. Seasonal wetlands are also an important breeding habitat for several amphibian species that depend on these temporary water bodies for successful reproduction. Seasonal wetlands, including vernal pools and seasonal swales, provide habitat for several special-status wildlife species in the plan area, including vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), Conservancy fairy shrimp (*Branchinecta conservatio*), Delta green ground beetle (*Elaphrus viridis*), California tiger salamander, California red-legged frog (*Rana draytonii*), and western spadefoot. In addition, many special-status plants could occur in these seasonal wetland communities including Sacramento Orcutt grass (*Orcuttia viscida*), and slender Orcutt grass (*Orcuttia tenuis*; see Appendix C-2).

Fresh emergent wetlands in the plan area are often associated with small artificial ponds, reservoirs, natural drainages, irrigation canals, and ditches. Characteristic plant species include cattail (*Typha* spp.), bulrush and tule (*Schoenoplectus* spp.), and smartweed (*Persicaria* spp.). Many waterbirds nest in emergent wetlands, including cinnamon teal, American coot (*Fulica americana*), and Wilson's snipe (*Gallinago delicata*). These species may be joined by migratory and wintering waterfowl such as American wigeon, northern shoveler (*Spatula clypeata*), and northern pintail (*Anas acuta*). Amphibians and reptiles that are found in emergent wetland communities include California toad, Sierran tree frog, valley garter snake, and Sierra garter snake (*Thamnophis couchii*). Special-status wildlife species in the plan area that may use fresh emergent wetlands include California tiger salamander, California red-legged frog, western pond turtle, giant garter snake (*Thamnophis gigas*), northern harrier, white-tailed kite, greater sandhill crane (*Antigone canadensis tabida*), California black rail (*Laterallus jamaicensis coturniculus*), saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*), and tricolored blackbird (*Agelaius tricolor*). There are also a variety of special-status plants that are known to occur within these wetland communities (see Appendix C-2).

Saline emergent wetlands (also known as estuarine and marine wetlands) in the plan area are located along the Delta. Saline emergent wetland habitat contains plant species, including California cord grass (*Sporobolus foliosus*), invasive dense-flowered cord grass (*Sporobolus densiflorus*), broad-leaved cattail (*Typha latifolia*), and various other grasses and forbs. A wide variety of wildlife species occur in saline emergent wetland habitats, including Virginia rail (*Rallus limicola*), sora (*Porzana carolina*), common yellowthroat (*Geothlypis trichas*), various shorebird species, and American mink.

Agriculture

The agriculture land cover group consists of the following cover types: orchards and vineyards, pasture, rice, and row and field crops.

Orchards and Vineyards

Areas mapped as orchards and vineyards occur in both the valley and lower foothill regions of the plan area, with the majority of orchards composed of walnut, almond, or olive trees. This type of agriculture requires active maintenance such as irrigation, pruning, and frequent mowing or herbicide use to discourage vegetation. If present, vegetation beneath the orchard trees typically consists of nonnative, weedy species. The vineyards in the study area contain grape vines, and maintenance is comparable to that in orchards. Orchards provide habitat for some nesting birds.

Pasture

Areas mapped as pasture occur in both the valley and lower foothill regions of the plan area and consist of actively irrigated fields utilized for grazing purposes. Vegetation in pastures, which is typically grazed or mowed, includes grasses, clovers, and rushes that form a dense ground cover. Burrowing owls may be found in pasture lands that support California ground squirrels.

Rice

Areas mapped as rice, primarily in the valley regions of the plan area, include both flooded and fallow rice fields. Rice fields commonly include irrigation features, such as berms, ditches, canals, and water control structures. Rice is grown as a monoculture, using tillage or herbicides to eliminate unwanted vegetation; remaining vegetation is generally confined to the berms, ditches, and canals between and around fields, and is dominated by wetland plants, both native and nonnative. Special-status wildlife species associated with rice fields include giant garter snake, burrowing owl, greater sandhill crane, Swainson's hawk, loggerhead shrike (*Lanius ludovicianus*), tricolored blackbird, western spadefoot, northwestern pond turtle, coast horned lizard (*Phrynosoma blainvillii*), and numerous bat species.

Row and Field Crops

Agricultural areas mapped as row and field crops are distributed primarily in the valley regions of the plan area. Row and field crops include both active and fallow fields that exhibit indicators of tillage. Row and field crop types include alfalfa, croplands, grain and hay, irrigated grain crops, irrigated hay field, irrigated row and grain crops, dry land grain crops, and upland crops. Active row and field crops are maintained with irrigation and herbicide application. Alfalfa, hay, and rotating crop farming methods can mean a given piece of land may be harvested several times during the year. The margins of row and field crops typically support nonnative, ruderal plant species. Swainson's hawks and northern harrier forage in agriculture land types such as alfalfa and grain crops. Greater sandhill cranes overwinter in fallow agriculture land such as rice fields, alfalfa, and grain crops.

Developed

The developed land cover group consists only of urban land cover.

Urban

Urban (or developed) areas within the plan area are characterized by residential, office, retail, industrial, recreational, governmental, and other land uses, including infrastructure and impermeable surfaces. The composition of vegetation within developed areas is variable, but most are ornamental species planted for landscaping or horticulture (e.g., fruit trees) and are actively irrigated. Developed areas also contain nonnative plant species, some of which are considered invasive by the California Department of Food and Agriculture (CDFA) and California Invasive Plant Council (Cal-IPC). These can include black mustard (*Brassica nigra*), Himalayan blackberry (*Rubus armeniacus*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), and Bermuda buttercup (*Oxalis pes-caprae*).

Urban areas in the plan area also contain remnant areas of annual grassland, riparian habitat along streams and rivers, and landscaped areas. In addition to the ornamental landscaping, these habitat types in the urban or developed areas provide nesting and foraging habitat for common bird species, including house sparrow (*Passer domesticus*), northern flicker, California scrub-jay (*Aphelocoma californica*), Brewer's blackbird (*Euphagus cyanocephalus*), and common starlings (*Sturnus vulgaris*). California ground squirrels, fox squirrels (*Sciurus niger*), house mice (*Mus musculus*), and striped skunks can also be found using habitats in urban landscapes, such as parks, schools, and vacant lots.

SENSITIVE NATURAL COMMUNITIES AND OTHER SENSITIVE HABITATS

Wildland cover types within the plan area include land cover types that could support sensitive natural communities or other sensitive habitats. Sensitive natural communities are native plant communities defined by CDFW as having limited distribution statewide or in a county or region and that are often vulnerable to environmental effects of projects (CDFW 2018). The hierarchical level of vegetation classification (i.e., plant groupings) at which sensitive natural communities are typically identified are called alliances, which are a category of vegetation classification that describes repeating patterns of plants across a landscape. Each alliance is defined by plant species composition, and reflects the effects of local climate, soil, water, disturbance, and other environmental factors. Sensitive natural communities identified using *The Manual of California Vegetation* (Sawyer et al. 2009) and mapped by VegCAMP that are known to occur or have potential to occur in the plan are included in Appendix C-3. There are also aquatic sensitive natural communities identified by CDFW's CNDDB (CNDDB 2024). The plan area supports 128 sensitive natural communities and six aquatic sensitive natural communities.

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration through CEQA, Section 1602 of the Fish and Game Code, Section 404 of the CWA, and the state Porter-Cologne Act, as discussed in Section 3.4.1, "Regulatory Setting," above. Sensitive natural habitat may be of special concern to agencies and conservation organizations for a variety of reasons, including their locally or regionally declining status or because they provide important habitat to common and special-status species.

In addition to habitats officially identified by CDFW as sensitive natural communities or habitats meeting the definition of waters of the United States, other sensitive habitats in the plan area include riparian habitats and oak woodlands.

SPECIAL-STATUS SPECIES

Special-status species are plants and animals that are legally protected under CESA (California Fish and Game Code Section 2050 et seq.), the federal ESA, or other regulations, as well as species considered sufficiently rare by the scientific community to qualify for such listing. For this EIR, special-status species are defined as:

- species listed or proposed for listing as threatened or endangered under the ESA (50 CFR 17.12 for listed plants and 50 CFR 17.11 for listed animals) and in various notices in the Federal Register;
- species that are candidates for possible future listing as threatened or endangered under ESA (75 CFR 69222);
- species that are listed or proposed for listing by the State of California as threatened or endangered under CESA (CCR, Title 14, Section 670.5);
- plants considered by CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, or 2B;
- species that meet the definition of rare or endangered under State CEQA Guidelines Section 15380;
- animals fully protected in California (Fish and Game Code Section 3511 for birds, Section 4700 for mammals, and Section 5050 for reptiles and amphibians); or
- animals identified by CDFW as species of special concern.

Special-status plant and special-status wildlife species that have been documented or have the potential to occur in the plan area are identified in Appendix C-2. The list of special-status species with potential to occur in the plan area was compiled from the California Natural Diversity Database (CNDDB 2024), the California Native Plant Society's Rare Plant Inventory (CNPS 2024), and USFWS' Information for Planning and Conservation (USFWS 2024), as well as covered species identified in regional HCPs. Given the number of special-status plants that may occur in the plan area and the specific microhabitat requirements of these species, all special-status plants that have been documented in the plan area or in a USGS 7.5-minute quadrangle directly adjacent to the plan area are assumed to potentially occur in the plan area. Special-status wildlife species were evaluated for their potential occurrence in the plan area.

CRITICAL HABITAT

Critical habitat is a USFWS-designated or NOAA Fisheries designated geographic area that is 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. A critical habitat designation only affects activities performed by Federal agencies or that involve a Federal permit, license, or funding, and that are likely to destroy or adversely modify the area of critical habitat. Critical habitat designations do not affect activities by private landowners if there is no federal "nexus"—that is, no federal funding or authorization related to the activity. Critical habitat for various federally listed species has been designated in each of the counties within the plan area (Tables 3.4-2 and 3.4-3).

Table 3.4-2 Acreage of USFWS Critical Habitat for Federally Listed Species in the Plan Area

Species	Federal Status	Total Acres
Amphibian		
Sierra Nevada yellow-legged frog	Endangered	117,134
California red-legged frog	Threatened	13,032
California tiger salamander	Threatened	12,873
Foothill yellow-legged frog – South Sierra DPS[1]	Endangered	51,418
Fish		
Delta smelt	Threatened	210,637
Green sturgeon – Southern DPS	Threatened	75,395
Chinook Salmon – Sacramento River winter-run ESU	Endangered	1,007
Invertebrates		
Vernal pool fairy shrimp	Threatened	40,926
Vernal pool tadpole shrimp	Endangered	38,786
Valley elderberry longhorn beetle	Threatened	515
Plants		
Sacramento Orcutt grass	Endangered	30,750
Slender Orcutt grass	Threatened	1,161
Colusa grass	Threatened	440
Solano grass	Endangered	440
Succulent owl's-clover	Threatened	89
Antioch Dunes evening-primrose	Endangered	19
Contra Costa wallflower	Endangered	19
Total		**594,641**

Notes: DPS = distinct population segment; ESU = evolutionary significant unit; totals may not sum exactly due to independent rounding.

[1] This critical habitat is proposed.

Source: Downloaded from US Fish and Wildlife Service and NOAA Fisheries 2025; compiled by SACOG in 2025.

Table 3.4-3 Mileage of NOAA Fisheries Critical Habitat for Federally Listed Species in the Plan Area

Species	Federal Status	Total Miles
Fish		
Steelhead – Central Valley DPS	Threatened	551
Chinook salmon – Central Valley spring-run ESU	Threatened	361
Chinook salmon – Sacramento River winter-run ESU	Threatened	115
Green sturgeon – Southern DPS	Threatened	253
Total		**1,280**

Notes: DPS = distinct population segment; ESU = evolutionary significant unit; totals may not sum exactly due to independent rounding.

Source: Downloaded from US Fish and Wildlife Service and NOAA Fisheries 2025; compiled by SACOG in 2025.

INVASIVE SPECIES

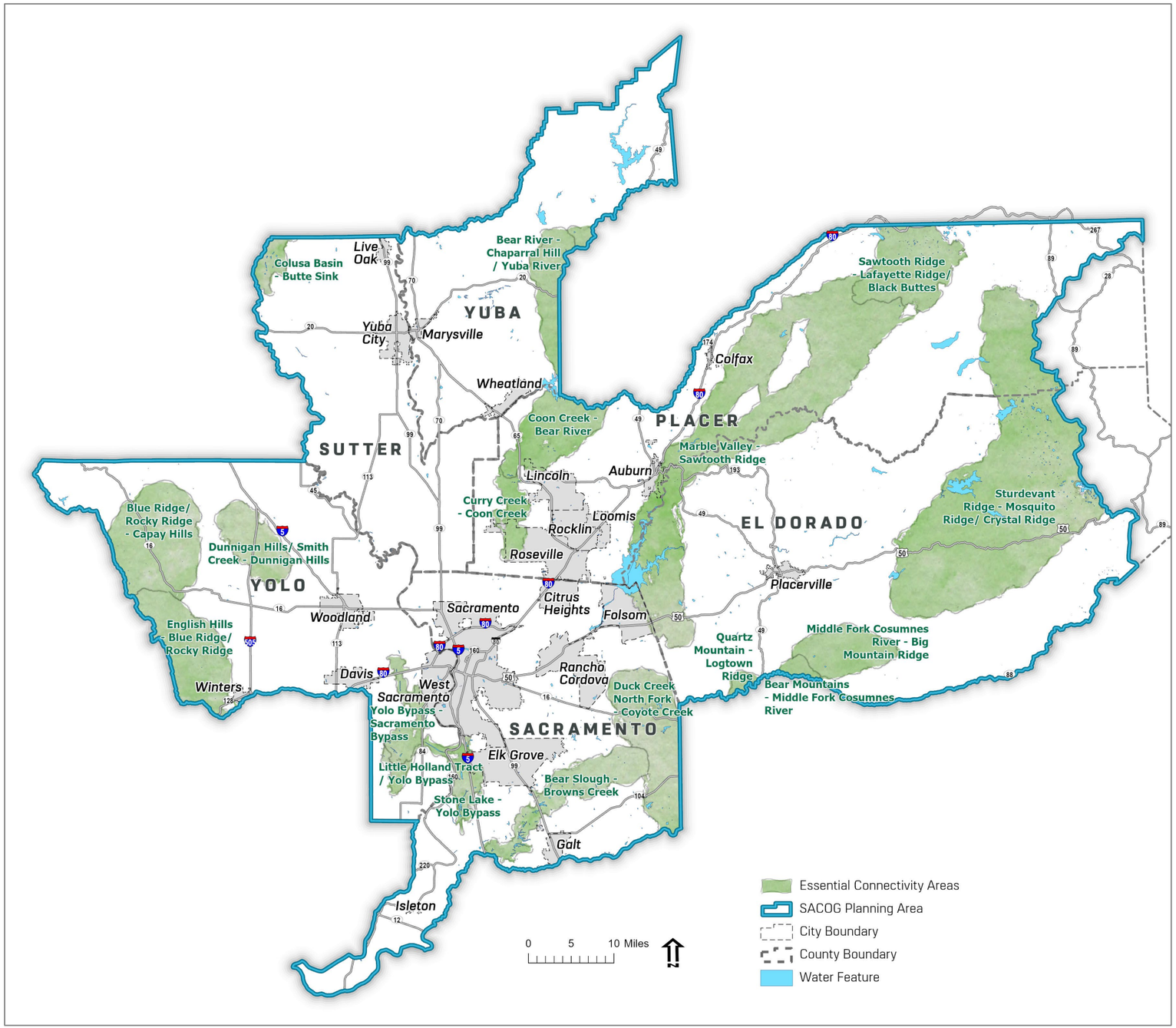
The plan area contains plant species that are considered invasive (e.g., giant reed [*Arundo donax*], red brome [*Bromus rubens*], Scotch broom [*Cytisus scoparius*]) by the Cal-IPC (Cal-IPC 2025), some of which are also classified as noxious weeds by the CDFA (CDFA 2021). The introduction and spread of invasive plants adversely affect natural vegetation communities by altering ecosystem processes (e.g., fire frequency, hydrological cycles), displacing native plant species, and reducing the quality of habitats that provide shelter and forage for wildlife species (Cal-IPC 2012). Invasive plants also affect the quality of forage on rangelands and cropland productivity. Invasive plant ratings assigned by Cal-IPC and CDFA are based on multiple criteria, including ecological impacts, invasive potential, distribution, the likelihood that eradication or control efforts would be successful, and perceived importance by CDFA and Cal-IPC.

Invasive plants in the plan area were not inventoried for this program-level analysis, because target invasive plants would differ widely across the plan area, depending on the sensitivity of the site to infestation, the nature of the specific proposed project, and the type of invasive plants in the specific area of impact. Target lists of invasive plants for specific project implementation would include both CDFA and Cal-IPC species, with priority given to CDFA A-rated weed species and species designated as highly or moderately invasive plants by Cal-IPC. Some CDFA B- and C-rated species would be included on project-specific target lists, if the applicable county agricultural commissioner identifies them as target invasive plants.

WILDLIFE MOVEMENT CORRIDORS

The plan area encompasses large areas of wildland that provide habitat for both common and rare plants and wildlife. Corridors between areas of natural habitat serve important ecological functions related to connectivity, such as wildlife movement, species dispersal, genetic exchange, and resilience to habitat effects of climate change. Some of these areas were mapped as Essential Connectivity Areas (ECA) for the California Essential Habitat Connectivity Project, which was commissioned by the California Department of Transportation (Caltrans) 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 ECAs were not developed for the purposes of defining areas subject to specific regulations by CDFW or other agencies.

The ECAs are not regulatory delineations and are identified as lands likely important to wildlife movement between large, mostly natural areas at the statewide level. The ECAs form a functional network of wildland that are important to the continued support of California's diverse natural communities. The ECAs 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). 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). ECAs are placeholder polygons that can inform land-planning efforts, but that would be improved 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. Figure 3.4-3 shows that ECAs occur within all six of the counties comprising the plan area, and that El Dorado, Placer, and Sacramento counties have the largest blocks of ECAs. There are 20 ECAs mapped within the plan area totaling approximately 1,032,759 acres, which equals roughly one-quarter (26 percent) of the plan area (Gogol-Prokurat 2014). These areas consist of mostly wildland but also include certain agricultural and developed areas (mostly rural residential).



Source: Prepared by SACOG in 2025.

Figure 3.4-3 Essential Connectivity Areas

NATIVE WILDLIFE NURSERY SITES

Nursery sites are locations where fish and wildlife concentrate for birthing, hatching, or raising young, such as nesting rookeries (e.g., heron and egret rookeries) or other areas used by colonially nesting birds (e.g., yellow-billed magpies [*Pica nuttalli*]), spawning areas for native fish, fawning areas for deer, and maternal roosts for bats. Nursery sites are considered in this analysis for native wildlife that are not defined and otherwise considered under CEQA as special-status species. The plan area could contain a variety of wildlife nursery sites. For example, mule deer habitat is mapped in many portions of the plan area, particularly along waterways in the Central Valley, in the foothills, and higher elevation areas (Gogol-Prokurat 2017). Therefore, fawning areas likely exist in the plan area. Other than this minimal data, native nursery sites are not mapped for the plan area and would need to be identified and evaluated at a site-specific level.

3.4.3 Environmental Analysis

METHODOLOGY

For the analysis of specific biological resources in this chapter, "existing conditions" refers to conditions at the time that the NOP was published in January of 2025. However, this chapter relies on older data to describe the baseline where that data is the most accurate source of information about existing conditions. The data relied on in this chapter describes the period 2010 to 2025, depending on the timeframe of specific data gathered for the analysis. The biological resource data available for this program-level document are compiled from resource surveys that were conducted over multiple years with varying completion dates, which makes it impractical to define a single year for the data. However, this chapter uses the most comprehensive and recently available maps and data on biological resources in each county. The biological resources environment in 2025 is reasonably represented by the available data describing conditions between 2010 and 2025. The key sources of data and information used to identify existing biological resources in the plan area are presented at the top of Section 3.4.2, "Environmental Setting".

This impact analysis recognizes that biological resources could be indirectly or directly affected by construction and maintenance activities associated with potential projects in the plan area. Biological resources could be directly or indirectly disturbed by the following activities:

Construction Impacts

- stream dewatering or installation of temporary water-diversion structures during construction of new growth, bridges, and other transportation facilities over riverine systems;
- temporary stockpiling of soil or construction materials and sidecasting of soil and other construction wastes;
- temporary removal of riparian vegetation along waterways during construction of new land uses and bridges;
- removal of vegetation during construction of temporary staging areas and access roads;
- ground disturbance;
- soil compaction in temporarily disturbed areas and generation of dust by construction equipment; and
- water runoff from the construction area.

Operation Impacts

- projected changes in regional growth and land use, where wildland or agricultural land cover types are permanently converted to developed land cover;
- indirect changes in biological resources due to regional growth and land use change, such as changes in hydrology and runoff due to increased impervious surfaces (Section 3.9, Hydrology and Water Quality for a discussion of water runoff and water quality degradation and associated mitigation measures);

- direct loss of habitat associated with roadway widening, new transportation facilities, or interchange, rail, and bikeway improvements;
- herbicide application and removal of vegetation as part of landscaping and road maintenance; and
- degradation of water quality in wetlands and waterways, resulting from road runoff containing petroleum products.

The regional growth pattern and transportation improvements in the 2025 Blueprint were overlaid with various land cover data. Road widenings, new roads, new or expanded interchanges, new grade separated crossings (including Class I and pedestrian bridges), and new rail transit infrastructure projects were analyzed by calculating a 100-foot buffer area around the center line of the proposed projects and measuring the area overlapping various land cover data. This method was used because details about the planned transportation improvements identified in the 2025 Blueprint, such as precise alignment, width, and location in relation to biological resources, are not known at this time. This method of analysis potentially overestimates potential impacts because many planned transportation improvements, such as road widenings, would not use the entire buffer area.

Where the projected regional growth and land use change or planned transportation network improvements and programs result in the conversion of land from wildland or potential habitat to developed or disturbed land, this analysis assumes there is a potential direct impact on biological resources. Because the precise location and acreage of sensitive natural communities within the plan area is not completely known, impacts on sensitive natural communities are quantified based on acreages of impact to wildland communities. The impact acreages are estimates of the existing acres within each land cover type that are overlain by the projected regional growth and land use change or planned transportation network improvements and programs in the 2025 Blueprint. This analysis qualitatively addresses, but does not quantify, indirect impacts on biological resources. However, wherever direct impacts occur, the analysis expects that there are potential indirect impacts on biological resources adjacent to the directly converted lands. Mitigation Measures proposed in this section are designed to address both potential direct and indirect impacts on biological resources. Impacts identified in this analysis for the plan area are shown in Table 3.4-4, for projected regional growth and land use change as well as transportation network improvements and programs.

Table 3.4-4 Biological Resources Impact Overview by Regional Growth and Transportation Network Improvements and Programs (acres)

Land Use Development Area	Regional Growth and Land Use Change Impacts	Transportation Network Improvements and Programs Impacts	Total Impact Acres	Percent of Total Acres
Land Cover Types Impact				
Wildland	22,864	2,923	**25,787**	1
Aquatic	148	70	**218**	0.2
Agriculture	8,326	1,506	**9,832**	1
Urban/Developed	9,569	8,104	**17,673**	**4**
Other Types of Impacts				
Critical Habitat	1,786	839	**2,625**	**0.4**
Essential Connectivity Areas	5,390	962	**6,352**	**0.6**
Total	**48,082**	**14,404**	**62,486**	**1.1**

Notes: Totals may not sum due to rounding.

Source: Downloaded from CAL FIRE in 2024, US Fish and Wildlife and NOAA Fisheries in 2025, and Spencer et al. in 2024; compiled by SACOG in 2025 and Ascent in 2025.

The mitigation measures described for potential impacts on sensitive biological resources have not been developed through formal consultation or coordination with resource agencies (e.g., CDFW, USFWS, NOAA Fisheries, USACE, and RWQCB). As part of subsequent, project-level environmental analysis, agencies must be contacted as part of the

environmental compliance process to determine specific compensatory mitigation for impacts on wetlands, state- and federally listed species, and riparian habitats. Additional mitigation measures may also be identified as conditions of future project permits (e.g., a Section 404 permit, Biological Opinions, or Section 1602 Streambed Alteration Agreement). The analysis assumes implementing agencies would ensure biological resources are treated in accordance with applicable federal, state and local laws and regulations as part of project planning, design and engineering.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the project could have a significant adverse effect related biological resources if it would:

- 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 CDFW or USFWS;
- 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 CDFW or USFWS;
- have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) 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, such as a tree preservation policy or ordinance;
- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan; or
- substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

ISSUES NOT DISCUSSED FURTHER

All of the topics identified in the significance criteria above are addressed in the following analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.4-1: Have a Substantial Adverse Effect, Either Directly or Through Habitat Modification, on Any Species Identified as a Candidate, Sensitive, or Special-Status in Local or Regional Plans, Policies, or Regulations by CDFW OR USFWS

The plan area contains approximately 2.5 million acres of habitat potentially suitable for special-status plant species, including wildland and aquatic habitats and approximately 3.5 million acres of habitat potentially suitable for special-status wildlife species, including wildland, aquatic, and agriculture habitats (Table 3.4-1). While the quality of agriculture habitat for wildlife may not be as high as wildland habitat types, some lands provide important habitat to special-status species, and a number of species are closely associated with certain agriculture crops and practices. Aquatic and riparian habitats throughout the plan area have been dramatically reduced in acreage and altered in function since European settlement and the remaining aquatic and riparian habitats provide important areas for feeding, shelter, and movement of wildlife.

As shown in Table 3.4-5, the regional growth pattern and planned transportation network improvements and programs in 2025 Blueprint could result in conversion of 35,837 acres, or approximately 1 percent, of potential habitat for special-status species in the plan area. Wildland communities in the plan area include several land cover types

that provide food, shelter, movement, and breeding habitat for special-status species, some of which are endemic to these habitats. The habitat type with the greatest affected acreage in the plan area is grassland (Table 3.4-5). Wetlands and other waters could also be impacted by development. In addition, conversion of all agricultural land cover types could result (Table 3.4-5).

Table 3.4-5 Potential Impacts on Land Cover Types and Vegetation Communities in the Plan Area

	Regional Growth and Land Use Change Impacts	Transportation Network Improvements and Programs Impacts	Total Impact Acres	Percent of Total Acres
Wildland Land Cover				
Conifer	225	35	**260**	0.03
Grassland	17,582	2,468	**20,050**	4.6
Hardwood	724	41	**765**	0.2
Oak Woodland	3,183	155	**3,339**	1.0
Chaparral	211	21	**232**	0.2
Riparian	751	195	**945**	1.2
Montane Hardwood-Conifer	122	–	**122**	0.2
Barren	62	3	**65**	0.2
Shrub/Scrub	5	5	**10**	0.3
Wildland Total	**22,864**	**2,923**	**25,787**	1.1
Aquatic Land Cover				
Water	46	32	**79**	0.1
Wetlands	101	37	**139**	0.2
Aquatic Total	**148**	**70**	**218**	0.2
Agriculture Land Cover				
Row and Field Crops	7,191	1,101	**8,292**	1.8
Rice	286	150	**436**	0.2
Orchards and Vineyards	796	250	**1,046**	0.3
Pasture	53	5	**58**	1.1
Agriculture Total	**8,326**	**1,506**	**9,832**	1.0
Developed Land Cover				
Urban	9,569	8,104	17,673	4.1
Developed Total	**9,569**	**8,104**	**17,673**	4.1
Total Land Cover	**40,906**	**12,603**	**53,509**	1.4

Note: Totals may not sum exactly due to independent rounding.

Source: Downloaded from CAL FIRE in 2024; compiled by SACOG in 2025.

The plan area supports 258 special-status plant species and 107 special-status wildlife species (Appendix C-2) and supports critical habitat for seven federally listed plant species and 10 federally listed wildlife species, which includes two evolutionarily significant units of Chinook salmon (Tables 3.4-2 and 3.4-3). In addition, one federally listed species has critical habitat proposed in the plan area (i.e., South Sierra DPS of foothill yellow-legged frog).

Regional Growth and Land Use Change

Implementation of the projected regional growth and land use change of the proposed 2025 Blueprint could result in the loss of special-status species and habitat. Impacts on special-status plants and special-status wildlife may include direct loss of individuals, reduction in local population size, reduced reproductive success, or habitat fragmentation.

An unknown number of individual special-status species could be injured or killed during implementation and construction within the plan area. Because the precise location and abundance of special-status species is unknown within the plan area, impacts are quantified based on habitat suitability and described in more detail below.

The Development Pattern in the 2025 Blueprint could result in potential conversion of approximately 22,864 acres of wildland land cover types, which includes approximately 17,582 acres of grassland communities, 148 acres of aquatic habitat types, and 8,326 acres of agriculture land conversion (Table 3.4-5). The projected regional growth and land use change could affect approximately 1,786 acres of critical habitat for four federally listed species and proposed critical habitat for South Sierra DPS of foothill yellow-legged frog (Table 3.4-6).

Table 3.4-6 Potential Impacts on Critical Habitat for Federally Listed Species in the Plan Area (acres)

Species	Regional Growth and Land Use Change Impacts	Transportation Network Improvements and Programs Impacts	Total Impact Acres	Percent of Total Acres
Amphibians				
Sierra Nevada yellow-legged frog	4	–	**4**	0.003
California red-legged frog	1	–	**1**	0.01
Foothill yellow-legged frog – South Sierra DPS [1]	7	–	**7**	0.01
Fish				
Delta smelt	1,667	592	**2,259**	1.1
Green sturgeon – Southern DPS	–	75	**75**	0.1
Invertebrates				
Vernal pool fairy shrimp	107	79	**186**	0.5
Vernal pool tadpole shrimp	–	79	**79**	0.2
Plants				
Sacramento Orcutt grass	–	7	**7**	0.02
Slender Orcutt grass	–	7	**7**	0.6
Total Critical Habitat	**1,786**	**839**	**2,625**	0.4

Note: Totals may not sum exactly due to rounding.

Source: Downloaded from US Fish and Wildlife Service and NOAA Fisheries 2025; Compiled by SACOG 2025.

Transportation Network Improvements and Programs

Implementation of the planned transportation network improvements and programs of the 2025 Blueprint could result in the loss of special-status species and their habitats. Impacts on special-status plants and special-status wildlife may include direct loss of individuals, reduction in local population size, reduced reproductive success, or habitat fragmentation. Table 3.4-5 includes estimates of potential regional impacts on habitat resulting from the planned transportation network improvements and programs intended to accommodate population growth and travel in the plan area. As noted above, an unknown number of individual special-status species could be injured or killed during implementation and construction within the plan area. Because the precise location and abundance of special-status species is unknown within the plan area, impacts are quantified based on habitat suitability and described in more detail below.

Class I trails that run parallel to new or expanded roadways would be captured by the 100-foot buffer around new or expanded roadway and light rail projects used to calculate potential impact acreages. Some proposed Class I trails may not be captured by the 100-foot buffer, such as trails located along rivers, through open space or recreation areas, or in other areas greater than 100 feet from new or expanded roadways. Development of these Class I trails could result in impacts on special-status species habitat in excess of the impact acreages described below.

The potential impact from planned transportation network improvements and programs is smaller than regional growth and land use change at approximately 2,923 acres of wildland communities, including 2,468 acres of grasslands, 70 acres of aquatic communities, and 1,506 acres of agriculture land converted (Table 3.4-5). Planned transportation network improvements and programs in the 2025 Blueprint could affect 839 acres of critical habitat for six federally listed species (Table 3.4-6).

Summary

Because implementation of the Development Pattern and planned transportation network improvements and programs in the 2025 Blueprint at the regional level would result in conversion of habitats that support or have the potential to contain special-status plants and wildlife, Impact 3.4-1 would be **potentially significant**.

Mitigation Measures

SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measures or other comparable measures identified by the lead agency at a project level would reduce impacts on biological resources and agencies with jurisdiction to adopt these measures should do so (Pub. Resources Code Section 21081).

Mitigation Measure 3.4-1: Conduct a Biological Resources Assessment

Prior to initiation of construction or other ground disturbing activities the implementing agency will conduct, or require an applicant to conduct, a preliminary biological analysis for the project site that will include review of Section 3.4.2, "Environmental Setting," Appendix C-2, Appendix C-3, and any relevant HCP/NCCP as well as current queries of CNDDB, CNPS Inventory, and USFWS IPaC, and a reconnaissance-level survey of the project site. If it is determined during the preliminary biological analysis that the project may have adverse impacts on habitats that could support special-status species or other sensitive biological resources (e.g., wetlands, nursery sites, sensitive natural communities) and these habitats cannot be avoided, the implementing agency will require a qualified biologist to conduct project specific land cover and habitat mapping (including delineation of aquatic resources if any are present), and a habitat assessment of the area of impact to identify whether any special-status plant or wildlife species habitat, sensitive natural communities, riparian habitat, or other sensitive habitats, wetlands, wildlife movement corridors, or wildlife nursery sites could be affected by construction activities. If it is determined during the preliminary biological analysis that sensitive natural communities have potential to occur in the project impact area, the implementing agency will identify and map on-site vegetation to the alliance level following standards described in the most current edition of *A Manual of California Vegetation* (including updated natural communities data at http://vegetation.cnps.org/). Additionally, the biologist will determine whether any local policies or ordinances intended to protect biological resources (e.g., tree removal policies) would apply, and whether construction activities would result in conflicts with these policies or ordinances. The data reviewed will include the Biological Resources setting of this Draft EIR (see Section 3.4.2, "Environmental Setting"), and the best available current data for the area, including vegetation mapping data, species distribution information, CNDDB, CNPS Inventory of Rare and Endangered Plants of California, and relevant general plans, HCPs, and NCCPs. The biological resources assessment will be completed at a time of year that is appropriate for identifying habitat and no more than 1 year prior to initiation of construction activities. A qualified biologist will:

- hold a wildlife biology, botany, ecology, forestry, or other relevant degree from an accredited university,
- be knowledgeable in relevant species life histories and ecology,
- be able to correctly identify relevant species and habitats,
- be knowledgeable about survey protocols,
- be knowledgeable about state and federal laws regarding the protection of special-status species, and
- have experience with CDFW's CNDDB and Biogeographic Information and Observation System (BIOS).

If the qualified biologist determines that the land within and in the vicinity of the area of impact does not contain habitat potentially suitable for special-status plant or wildlife species, sensitive natural communities, riparian habitat, or other sensitive habitats, wetlands, wildlife movement corridors, or native wildlife nursery sites, construction activities would not result in adverse effects on these resources and project implementation would not result in conflict with a local policy or ordinance or an adopted HCP or NCCP. The biologist will document these findings in a letter report to the implementing agency, and no further mitigation is required.

Mitigation Measure 3.4-2: Identify Special-Status Plant Species, and Avoid, Minimize, and Mitigate Impacts

If the qualified biologist, after implementation of Mitigation Measure 3.4-1, determines that habitat potentially suitable for special-status plants is present within the area of impact and could be adversely affected by construction activities, then the following measures will be implemented:

- Eleven special-status plant species (one of which constitutes two subspecies) are covered under adopted HCPs or NCCPs within the plan area (Natomas Basin HCP, South Sacramento HCP, Western Placer County HCP/NCCP, and Yolo HCP/NCCP; Appendix C-2). If a project is within the plan area of an adopted HCP or NCCP, and the project qualifies as a covered activity under the HCP or NCCP, then the implementing agency may seek coverage under the plan. If permitting through an adopted HCP or NCCP is pursued, the implementing agency will be required to meet the permit conditions and other requirements established in the plan's Implementing Agreement, which often includes (depending on the plan) submitting a complete application package, paying required fees, fulfilling any appropriate survey requirements, and complying with all applicable conservation measures.
- For projects that are not within the plan area of an adopted HCP or NCCP or if special-status plant species that are not covered under an adopted HCP or NCCP may be present within the area of impact, the following measures will apply:
  - Prior to project initiation and during the blooming period for special-status plant species with potential to occur in the area of impact, a qualified botanist will conduct protocol-level surveys for special-status plants in accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018 or current version). A qualified botanist will:
    - be knowledgeable about plant taxonomy,
    - be familiar with plants of the region, including special-status plants and sensitive natural communities,
    - have experience conducting floristic botanical field surveys as described in the CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities*,
    - be familiar with *The Manual of California Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/), and
    - be familiar with federal, state, and local statutes and regulations related to plants and plant collecting.
  - If no special-status plants are found during the protocol-level survey, the botanist will document the findings in a letter report to USFWS or CDFW, as appropriate depending on species status, and the implementing agency and no further mitigation will be required.
  - If special-status plant species are found that cannot be avoided during construction, the implementing agency will consult with CDFW or USFWS to determine the appropriate mitigation measures for direct and indirect impacts that could occur as a result of project construction. The implementing agency will implement the agreed-upon mitigation measures to compensate for the loss of occupied habitat or individuals. Mitigation measures may include preserving and enhancing existing populations, creation of off-site populations on project mitigation sites through seed collection or transplantation, and/or restoring occupied habitat in sufficient quantities to offset the loss of occupied habitat and/or individuals.

Mitigation Measure 3.4-3: Identify Special-Status Wildlife and Avoid, Minimize, and Mitigate Impacts

If the qualified biologist, after implementation of Mitigation Measure 3.4-1, determines that habitat potentially suitable for special-status wildlife is present within the area of impact and could be adversely affected by construction activities, then the following measures will be implemented:

- Thirty- two special-status wildlife species are covered under adopted HCPs or NCCPs within the plan area (Natomas Basin HCP, South Sacramento HCP, Western Placer County HCP/NCCP, and Yolo HCP/NCCP; Appendix C-2). If a project is within the plan area of an adopted HCP or NCCP, and the project qualifies as a covered activity under the HCP or NCCP, then the implementing agency may seek coverage under the plan. If permitting through an adopted HCP or NCCP is pursued, the implementing agency will be required to meet the permit conditions and other requirements established in the plan's Implementing Agreement, which often includes (depending on the plan) submitting a complete application package, paying required fees, fulfilling any appropriate survey requirements, and complying with all applicable conservation measures.
- For projects that are not within the plan area of an adopted HCP or NCCP or if special-status wildlife species that are not covered under an adopted HCP or NCCP may be present within the area of impact due to the presence of habitat potentially suitable for the species, protocol-level surveys (where applicable), preconstruction surveys, and avoidance and minimization measures will be required. Surveys will be conducted by a qualified biologist with the proper handling permits, as applicable. Acceptable species-specific survey procedures will be developed in consultation with CDFW or USFWS, as appropriate depending on species status. Alternatively, if habitat potentially suitable for the special-status species is determined to be present within the area of impact, presence of special-status species may be assumed instead of confirmed with surveys. Consultation with CDFW, USFWS, and/or NOAA Fisheries may also be required, depending on the type of impact and the species involved. Refer to the Avoidance and Minimization Measures below for each special-status wildlife species with potential to occur in the plan area and apply to the project as applicable and feasible.

Avoidance and Minimization Measures

California Red-Legged Frog

- If habitat potentially suitable for California red-legged frog is determined to be present within or in the vicinity of the area of impact, the implementing agency will retain a USFWS-approved biologist to conduct a pre-construction survey for California red-legged frog within the area of impact no more than 2 weeks before commencement of project construction activities.
- If no California red-legged frogs are found, further mitigation will not be required.
- If California red-legged frog adults, tadpoles, or eggs are found, the biologist will contact USFWS and CDFW to determine whether relocating the species is appropriate. If the agencies approve of relocation, a USFWS-approved biologist will be allowed sufficient time to move the species from the work site before work activities begin.
- The biologist will conduct environmental awareness training for all construction personnel on required avoidance procedures and protocols if a California red-legged frog enters an active construction zone.
- To the extent practicable, construction will not occur during the wet season, when California red-legged frogs are more likely to disperse through upland habitats. Work within all waters, wetlands, and the riparian corridor will be limited to the period from April 15 to October 15, except for vegetation clearing.
- For work conducted during the California red-legged frog migration season (November 1 through May 31), the following will apply:
    - Flagging will be placed around the area of impact during ground-disturbing activities after hand excavation of burrows has been completed. Flagging will also be placed around all spoils and stockpiles. No project activities will occur in the flagged area. A qualified biologist will visit the site weekly to ensure that the flagging is in good working condition. Flagging design will be subject to the approval of USFWS. If flagging is not used, a qualified biological monitor will be on-site during all ground disturbance activities.

- A qualified biologist will survey the area of impact (including access roads) in mornings following measurable precipitation events. Construction may commence once the biologist has confirmed that no California red-legged frogs are in the work area.

- Each day that work is conducted, the following will apply:
  - Prior to beginning work each day, underneath equipment and stored pipes greater than 1.2 inches in diameter will be inspected for California red-legged frogs. If any are found, they will be allowed to move out of the construction area.
  - Trenches and holes within the area of impact will be covered and inspected daily for stranded individuals. Trenches and holes deeper than 1 foot will contain escape ramps (maximum slope of 2:1) to allow trapped individuals to escape uncovered holes or trenches. Holes and trenches will be inspected prior to filling.
  - All food and food-related trash will be enclosed in sealed trash containers at the end of each workday and removed completely from the area of impact once every three days to avoid attracting wildlife.
  - A speed limit of 15 mph will be maintained on dirt roads.
  - All equipment will be maintained such that there are no leaks of automotive fluids such as fuels, oils, and solvents. Any fuel or oil leaks will be cleaned up immediately and disposed of properly.
  - Plastic monofilament netting (erosion control matting) or similar material will not be used within the area of impact because California red-legged frogs may become entangled or trapped. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.
  - Hazardous materials (e.g., such as fuels, oils, solvents) will be stored in sealable containers in a designated location that is at least 100 feet from aquatic habitat. If it is not feasible to store hazardous materials 100 feet from wetlands and river and stream channels, then spill containment measures will be implemented to prevent the possibility of accidental discharges to wetlands and waters.
- Prior to commencement of ground-disturbing activities (including vegetation disturbance activities) that would result in permanent loss of habitat for California red-legged frog, the implementing agency will implement the following measures to compensate for loss of California red-legged frog habitat:
  - The implementing agency will provide suitable in-kind habitat that will be created, restored, and/or set aside in perpetuity at a ratio of 3:1. Alternatively, credits will be purchased at a USFWS-approved conservation bank. Compensation plans will be subject to review and approval by USFWS.
  - In-kind habitat compensation will occur prior to the initiation of ground or vegetation disturbance activities. Aquatic habitat will be provided for damage or loss of aquatic habitat and upland habitat will be provided for damage or loss of upland habitat. Compensation will be accomplished through the following options: 1) acquire land, by itself, or possibly in conjunction with a conservation organization, State park, State Wildlife Area, National Wildlife Refuge, or local regional park that provides occupied habitat; 2) purchase the appropriate credit units at a USFWS-approved conservation bank; 3) restore habitat to support California red-legged frog; or 4) other method as determined by USFWS
- If the final rule regarding the interpretation of the definition of take (Federal Register Vol. 90 No. 73, USFWS 2025) is approved and published prior to implementation of projects under the 2025 Blueprint EIR, instead of being required to follow the mitigation measures listed above, the project proponent will comply with the legal requirements of ESA as amended by the final rule and will provide mitigation as directed by USFWS or NOAA Fisheries (which could include the above, if directed).

California Tiger Salamander

- If habitat potentially suitable for California tiger salamander is determined to be present within or in the vicinity of the area of impact, the implementing agency will retain a USFWS-approved biologist to conduct a pre-construction survey for California tiger salamander within the area of impact no more than 2 weeks before commencement of project construction activities.

- If California tiger salamander is found during surveys:
  - When feasible, a 50-foot no-disturbance buffer will be constructed around burrows that provide suitable upland habitat for California tiger salamander. Burrows considered suitable for California tiger salamander will be determined by the USFWS-approved qualified biologist.
  - All suitable burrows directly affected by construction will be hand excavated under the supervision of a qualified wildlife biologist. If California tiger salamanders are found, the biologist will relocate individuals to the nearest burrow that is outside of the area of impact.
  - The biologist will conduct environmental awareness training for all construction personnel on required avoidance procedures and protocols if a California tiger salamander enters an active construction zone.
  - For work conducted during the California tiger salamander migration season (November 1 to May 31):
    - Flagging will be placed around the area of impact during ground-disturbing activities after hand excavation of burrows has been completed. Flagging will also be placed around all spoils and stockpiles. No project activities will occur in the flagged area. A qualified biologist will visit the site weekly to ensure that the flagging is properly placed. Flagging design will be subject to the approval of USFWS. If flagging is not used, a qualified biological monitor will be on-site during all ground disturbance activities.
    - A qualified biologist will survey the area of impact (including access roads) in mornings following measurable precipitation events. Construction may commence once the biologist has confirmed that no California tiger salamanders are in the work area.
  - Each day that work is conducted, the following will apply:
    - Prior to beginning work each day, underneath equipment and stored pipes greater than 1.2 inches in diameter will be inspected for California tiger salamander. If any are found, they will be allowed to move out of the construction area.
    - Trenches and holes within the area of impact will be covered and inspected daily for stranded individuals. Trenches and holes deeper than 1 foot will contain escape ramps (maximum slope of 2:1) to allow trapped individuals to escape uncovered holes or trenches. Holes and trenches will be inspected prior to filling.
    - All food and food-related trash will be enclosed in sealed trash containers at the end of each workday and removed completely from the area of impact once every three days to avoid attracting wildlife.
    - A speed limit of 15 mph will be maintained on dirt roads.
    - All equipment will be maintained such that there are no leaks of automotive fluids such as fuels, oils, and solvents. Any fuel or oil leaks will be cleaned up immediately and disposed of properly.
    - Plastic monofilament netting (erosion control matting) or similar material will not be used within the area of impact because California tiger salamander may become entangled or trapped. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.
    - Hazardous materials (e.g., fuels, oils, solvents) will be stored in sealable containers in a designated location that is at least 100 feet from aquatic habitat. If it is not feasible to store hazardous materials 100 feet from wetlands and river and stream channels, then spill containment measures will be implemented to prevent the possibility of accidental discharges to wetlands and waters.
  - Prior to commencement of ground-disturbing activities (including vegetation disturbance activities) that would result in permanent loss of habitat for California tiger salamander, the implementing agency will implement the following measures to compensate for loss of California tiger salamander habitat:
    - The implementing agency will provide suitable in-kind habitat that will be created, restored, and/or set aside in perpetuity at a ratio of 3:1. Alternatively, credits will be purchased at a USFWS-approved conservation bank. Compensation plans will be subject to review and approval by USFWS.

- In-kind habitat compensation will occur prior to initiation of ground or vegetation disturbance activities. Aquatic habitat will be provided for damage or loss of aquatic habitat and upland habitat will be provided for damage or loss of upland habitat. Compensation will be accomplished through the following options: 1) acquire land, by itself, or possibly in conjunction with a conservation organization, State park, State Wildlife Area, National Wildlife Refuge, or local regional park that provides occupied habitat; 2) purchase the appropriate credit units at a USFWS-approved conservation bank; 3) restore habitat to support the Central California tiger salamander; or 4) other method as determined by USFWS.

- If the final rule regarding the interpretation of the definition of take (Federal Register Vol. 90 No. 73, USFWS 2025) is approved and published prior to implementation of projects under the 2025 Blueprint EIR, instead of being required to follow the mitigation measures listed above, the project proponent will comply with the legal requirements of ESA as amended by the final rule and will provide mitigation as directed by USFWS or NOAA Fisheries (which could include the above, if directed).

Sierra Nevada Yellow-Legged Frog, Foothill Yellow-Legged Frog, Northern Leopard Frog, Southern Long-Toed Salamander, Western Spadefoot, and Yosemite Toad

- If habitat potentially suitable for other special-status amphibians is determined to be present within or in the vicinity of the area of impact, the implementing agency will retain a qualified biologist familiar with the life cycle of special-status amphibians with potential to occur in the area of impact (e.g., Sierra Nevada yellow-legged frog, foothill yellow-legged frog, northern leopard frog, southern long-toed salamander, western spadefoot, Yosemite toad) to conduct a pre-construction survey prior to commencement of construction activities, including land clearing, within the area of impact and a 400-foot buffer around the area of impact. Surveys will consist of "walk and turn" surveys of areas beneath surface objects (e.g., rocks, leaf litter, moss mats, coarse woody debris) for salamanders and visual searches for frogs within upland and aquatic habitat. Surveys will be conducted within the appropriate season to maximize potential for observation for each species, and appropriate surveys will be conducted for the applicable life stages (i.e., eggs, larvae, adults).

- If no special-status amphibians are found, then no further mitigation will be required.

- If special-status amphibians are found during the protocol-level survey, then the implementing agency will consult with CDFW or USFWS, as appropriate. Mitigation measures will be approved by CDFW or USFWS and may include relocating individuals, placement of flagging for avoidance, and construction monitoring by a qualified biologist. No project activities will occur in the flagged area. The implementing agency will implement the agreed-upon mitigation measures to offset the loss of occupied habitat or individuals.

- A qualified biologist will be present during the grubbing and clearing activities in riparian and aquatic habitats in the area of impact.

- For projects that include water work, egg and tadpole surveys will be conducted. If Sierra Nevada yellow-legged frog, foothill yellow-legged frog, or Yosemite toad eggs or tadpoles are identified in the work area, or within 250 feet downstream of the work area, work will stop, USFWS and CDFW will be notified to determine appropriate measures to avoid take of the species before work resumes, and water quality will be monitored so that the activity does not directly or indirectly harm eggs or tadpoles.

- If western spadefoot, which is currently proposed for listing, is listed under ESA by the time of implementation, the project proponent will implement the above measures in consultation with and with approval from USFWS.

- For federally listed species, if the final rule regarding the interpretation of the definition of take (Federal Register Vol. 90 No. 73, USFWS 2025) is approved and published prior to implementation of projects under the 2025 Blueprint EIR, instead of being required to follow the mitigation measures listed above, the project proponent will comply with the legal requirements of ESA as amended by the final rule and will provide mitigation as directed by USFWS or NOAA Fisheries (which could include the above, if directed).

Giant Garter Snake

- If habitat potentially suitable for giant garter snake is determined to be present within or in the vicinity of the area of impact, the implementing agency will retain a qualified biologist to conduct a field investigation to delineate giant garter snake aquatic habitat within the area of impact and adjacent areas within 300 feet of the area of impact. Giant garter snake aquatic habitat includes agricultural ditches.
- The qualified biologist will conduct environmental awareness training for all construction personnel working on the project site on required avoidance procedures and protocols to implement if a giant garter snake enters an active construction zone.
- All construction activities within giant garter snake aquatic and upland habitat in and around the site will be conducted between May 1 and September 15, the active period for giant garter snakes. This would reduce direct impacts on the species because the snakes would be active and respond to construction activities by moving out of the way.
- If construction activities occur in giant garter snake aquatic habitat, aquatic habitat will be dewatered and then remain dry and absent of aquatic prey (e.g., fish and tadpoles) for 15 days prior to initiation of construction activities. If complete dewatering is not possible, the implementing agency will consult with CDFW and USFWS to determine what additional measures may be necessary to minimize effects to giant garter snake. After aquatic habitat has been dewatered 15 days prior to construction activities, flagging will be placed a minimum of 300 feet into adjacent uplands to isolate both the aquatic and adjacent upland habitat and the area will be avoided (i.e., no project activities will occur in the flagged area). In addition, high-visibility flagging will be erected to identify the construction limits and to protect adjacent habitat from encroachment of personnel and equipment, which will include all other giant garter snake habitat not described above, and the flagged area will be avoided by all construction personnel. The flagging and work area will be inspected by the approved biologist to ensure that fencing is intact and no snakes have entered the work area before the start of each workday. The flagging will be maintained by the contractor until completion of the project.
- Each day that work is conducted, the following will apply:
  - During construction, an approved biologist experienced with giant garter snake identification and behavior will be on-site daily when construction activities within aquatic habitat or within 300 feet of aquatic habitat are taking place. The biologist will inspect the project site daily for giant garter snakes prior to that day's start of construction activities.
  - If a giant garter snake is observed, the biologist will notify CDFW and USFWS immediately. Construction activities will be suspended in a 100-foot radius of the garter snake until the snake leaves the site on its own. If necessary, the biologist will consult with CDFW and USFWS regarding appropriate procedures for relocation. If the individual is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect giant garter snake within 1 business day to CDFW and USFWS. The biologist will report any take of listed species to USFWS immediately. Any worker who inadvertently injures or kills a giant garter snake or who finds one dead, injured, or entrapped must immediately report the incident to the approved biologist.
  - All excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within habitat suitable for giant garter snake will be inspected for giant garter snake by the approved biologist prior to being moved.
  - If erosion control is implemented within the area of impact, non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or

similar material will be used to ensure snakes are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.

- The applicant will ensure that there is no-net-loss of giant garter snake habitat by compensating for loss of habitat at a ratio of 1:1, by purchasing credits from a USFWS-approved conservation bank.
- If the final rule regarding the interpretation of the definition of take (Federal Register Vol. 90 No. 73, USFWS 2025) is approved and published prior to implementation of projects under the 2025 Blueprint EIR, instead of being required to follow the mitigation measures listed above, the project proponent will comply with the legal requirements of ESA as amended by the final rule and will provide mitigation as directed by USFWS or NOAA Fisheries (which could include the above, if directed).

Northwestern Pond Turtle

- If habitat potentially suitable for northwestern pond turtle is identified within or in the vicinity of the area of impact, the implementing agency will retain a qualified biologist familiar with the species to conduct a preconstruction survey in the area of impact 24 hours before initiation of ground-disturbing construction activities in habitat potentially suitable for the species. Surveys for northwestern pond turtle will be conducted throughout the area of impact and within approximately 1,500 feet of suitable aquatic habitat within or adjacent to the area of impact.
- If no northwestern pond turtles are found, then further mitigation will not be required.
- If northwestern pond turtles or their nest sites are found, the biologist will contact CDFW to determine whether relocation and/or avoidance buffers and nest enclosures are appropriate. If CDFW approves of moving the individual, the biologist will be allowed sufficient time to move the northwestern pond turtle from the work site before work activities begin.
- If northwestern pond turtle, which is currently proposed for listing, is listed under ESA by the time of implementation, the applicant will implement the above measures in consultation with and with approval from USFWS.

Coast Horned Lizard

- If habitat potentially suitable for coast horned lizard is determined to be present within or in the vicinity of the area of impact, the implementing agency will retain a qualified biologist familiar with coast horned lizard.
- Within 14 days before the initiation of construction activities or off-site improvements, a qualified biologist familiar with the life history of coast horned lizard shall conduct a preconstruction survey of habitat suitable for this species on the project site, which shall include walking linear transects of the site.
- If coast horned lizards are not detected during the preconstruction survey, the qualified biologist shall submit a report summarizing the results of the survey to the applicant and El Dorado County, and further mitigation shall not be required.
- If coast horned lizards are detected, a qualified biologist with an appropriate CDFW Scientific Collecting Permit that allows handling of reptiles shall be present during initial ground disturbance activities and shall inspect the project site before initiation of project activities. If coast horned lizards are detected, the qualified biologist shall move individuals into nearby suitable habitat that will not be disturbed by project activities

California Spotted Owl

- If habitat potentially suitable for California spotted owl is determined to be present within the area of impact, the implementing agency will retain a qualified biologist to conduct protocol-level surveys for the species in suitable nesting habitat within 0.25 miles of the area of impact prior to initiation of construction activities. Surveys for California spotted owl will follow the *Protocol for Surveying for Spotted Owl in Proposed Management Activity Areas and Habitat Conservation Areas* (USFS 1993) or any protocol subsequently developed by USFWS should the species be listed. If applicable to location of project, US Forest Service biologists from either the Plumas National Forest, Tahoe National Forest, or El Dorado National Forest will be contacted to determine if they have any

recent survey and occurrence data for California spotted owl that have not been made publicly available to determine presence within 0.25 miles of the project site. This can include other US Forest Service designated habitat for California spotted owl, such as protected activity centers or core areas.

- If California spotted owl is determined to not be present within 0.25 miles of the project site, then further mitigation will not be required.
- If nesting California spotted owl or other California spotted owl habitat designated by the US Forest Service are identified within the area of impact or within 0.25 miles of the area of impact, project activities will be delayed within 0.25 miles of the area of impact between March 1 and August 31 to avoid disturbances to or loss of the active nest site until the nest is no longer active. Project activities include vegetation removal, earth moving, and construction. This buffer may be reduced through consultation with CDFW or USFWS if this species is listed under ESA by the time of implementation. The following will also apply:
  - The project applicant will not remove any trees between September 1 and February 28 that contain active nest sites for California spotted owl during the breeding season. Once a qualified biologist has deemed a nest site inactive for 2 consecutive years, the restriction to protect the nest tree will be lifted.
  - If California spotted owl, which is currently proposed for listing, is listed under ESA by the time of implementation, the applicant will implement the above measures in consultation with and approval from USFWS.
- If avoiding work between March 1 and August 31 is not feasible, a no disturbance buffer of 0.25 mile will be established around active California spotted owl nests and any other US Forest Service California spotted owl designated habitat (e.g., protected activity center) and no construction activities will occur within this buffer until the chicks have fledged as determined by a qualified Registered Professional Forester or biologist.

American Goshawk

- If habitat potentially suitable for American goshawk (previously northern goshawk) is determined to be present within the area of impact, the implementing agency will retain a qualified biologist to conduct protocol-level surveys for the species in suitable nesting habitat within 0.25 miles of the area of impact prior to initiation of construction activities. Surveys for American goshawk will follow the *Northern Goshawk Inventory and Monitoring Technical Guide* (Woodbridge and Hargis 2006), or another appropriate method determined by the appropriate regulatory agency. If applicable to location of project, US Forest Service biologists from either the Plumas National Forest, Tahoe National Forest, or El Dorado National Forest will be contacted to determine if they have any recent survey and occurrence data for American goshawk that have not been made publicly available to determine presence within 0.25 miles of the project site. This can include other US Forest Service designated habitat for American goshawk, such as protected activity centers.
- If no American goshawk nests are found, then further mitigation will not be required.
- If nesting American goshawk or other American goshawk habitat designated by the US Forest Service are identified within the area of impact or within 0.25 miles of the area of impact, project activities will be delayed within 0.25 miles of the area of impact between March 15 and August 15 to avoid disturbances to or loss of an active nest site, until the nest is no longer active. Project activities include vegetation removal, earth moving, and construction. This buffer may be reduced through consultation with CDFW.
- If avoiding work between March 15 and August 15 is not feasible, a no disturbance buffer of 0.25 mile will be established around active American goshawk nests and any other US Forest Service American goshawk designated habitat (e.g., protected activity center) and no construction activities will occur within this buffer until the chicks have fledged as determined by a qualified Registered Professional Forester or biologist.

Great Gray Owl

- If habitat potentially suitable for great gray owl is determined to be present within the area of impact, the implementing agency will retain a qualified biologist to conduct protocol-level surveys for the species in suitable nesting habitat within 0.25 miles of the area of impact prior to initiation of construction activities. Surveys for great

gray owl will follow the *Survey Protocol for Great Gray Owl (*Strix nebulosa*) within the Northwest Forest Plan Area* (Huff and Goodwin 2016), or another appropriate method determined by the appropriate regulatory agency.

- If no great gray owl nests are found, then further mitigation will not be required.
- If great gray owl nests are identified in the area of impact or within 0.25 miles of the area of impact, project activities will be delayed within 0.25 miles of the area of impact between March 15 and July 15 to avoid disturbances to or loss of an active nest site, until the nest is no longer active. Project activities include vegetation removal, ground disturbance, and construction. This buffer may be reduced through consultation with CDFW.

Swainson's Hawk

- If habitat potentially suitable for Swainson's hawk is identified within or in the vicinity of the area of impact, and if construction activities occur between February 1 and August 31, the implementing agency will retain a qualified biologist to conduct surveys for Swainson's hawk in accordance with the Swainson's Hawk Technical Advisory Committee 2000 guidelines (SHTAC 2000), or current guidance. Surveys will cover a minimum of a 0.5-mile radius around the construction area.
- If no Swainson's hawk nests are detected, then further mitigation will not be required.
- If nesting Swainson's hawks are detected, a no disturbance buffer of between 0.25-miles and 0.5-miles will be established around nest occurrences, depending on the level of existing human disturbance in the vicinity of the nest site. Buffers will be maintained until a qualified biologist has determined that the young have fledged.
    - The buffer may be adjusted if, in consultation with CDFW, a qualified biologist determines that an alternative buffer will not result in take of Swainson's hawks adults, young, or eggs because of particular site features (e.g., topography, natural line-of-sight barriers), level of project disturbance, or other considerations. If the buffer is reduced, a qualified biologist will monitor the behavior of the Swainson's hawks during all project activities within 0.25 miles or 0.5 miles (depending on the level of existing human disturbance in the vicinity of the nest site) of the nesting Swainson's hawk. If the Swainson's hawks are disturbed or agitated (e.g., vocalizations, fluffing feathers to increase body size appearance) by the project activities, the biologist will have the authority to halt the activities and re-establish a buffer consistent with the bullet directly above until the agitated behavior ceases and normal behavior resumes.
- If potential nesting trees are to be removed during construction activities, removal will take place outside of Swainson's hawk nesting season and the implementing agencies will develop a plan, in consultation with CDFW, to replace known nest trees at a ratio of 3:1. If replacement planting is implemented, monitoring will be conducted annually for 5 years to assess the mitigation's effectiveness. The plan will include a performance standard for the mitigation that results in a no net loss of nesting habitat.
- If foraging habitat (e.g., annual grassland, agricultural land) is removed as a result of the project, mitigation will occur at a 1:1 ratio, which may be achieved through the dedication of a conservation easement, purchasing appropriate mitigation bank credits, or another CDFW approved action.

Burrowing Owl

- If proposed activities are implemented in habitat suitable for burrowing owls, a qualified biologist will conduct surveys for burrowing owls in areas of habitat suitable for the species on and within 1,640 feet (500 meters) of the project site. Inaccessible areas (e.g., adjacent private property) will not be surveyed directly, but the biologist may use binoculars or a spotting scope to survey these areas. A minimum of four surveys will be conducted to determine whether burrowing owls occupy the site. Surveys will be conducted according to Appendix D of the 2012 *Staff Report on Burrowing Owl Mitigation* prepared by the California Department of Fish and Game (now CDFW) (CDFG 2012), or any subsequent updated guidance. If feasible, at least one survey should be conducted between February 15 and April 15 and the remaining surveys should be conducted between April 15 and July 15, at least three weeks apart. Because burrowing owls may recolonize a site after only a few days, one of the surveys, or an additional survey, will be conducted no less than 14 days before initiating ground disturbance activities to verify that take of burrowing owl would not occur.

- If no burrowing owls are found, the qualified biologist will submit a report documenting the survey methods and results to the lead agency, and no further mitigation will be required.
- If a burrow occupied by a burrowing owl is found during the surveys, the project applicant will establish and maintain a buffer around the occupied burrow and any identified satellite burrows (i.e., non-nesting burrows that burrowing owls use to escape predators or move young into after hatching) to prevent take of the burrowing owls.
    - During the non-breeding season (September 1 through January 31), the minimum buffer distance will be 164 feet (50 meters). During the breeding season (February 1 through August 31), the minimum buffer distance will be increased to 1,640 feet (500 meters).
    - The buffer may be adjusted if, in consultation with CDFW, a qualified biologist determines that an alternative buffer will not result in take of burrowing owl adults, young, or eggs because of particular site features (e.g., topography, natural line-of-sight barriers), level of project disturbance, or other considerations. If the buffer is reduced, a qualified biologist will monitor the behavior of the burrowing owls during all project activities within 1,640 feet of the burrow. If the owls are disturbed or agitated (e.g., vocalizations, bill snaps, fluffing feathers to increase body size appearance, drooping wings and rotating them forward, crouching and weaving back and forth) by the project activities, the biologist will have the authority to halt the activities and re-establish a buffer consistent with the bullet directly above until the agitated behavior ceases and normal behavior resumes.
    - The buffer will remain in place around the occupied burrow and associated satellite burrows until a qualified biologist has determined through noninvasive methods that the burrows are no longer occupied by burrowing owl. A previously occupied burrow will be considered unoccupied if surveys demonstrate that no owls have used the burrow for seven consecutive days.
    - Locations of burrowing owls detected during surveys will be reported to the CNDDB.
- If implementation of a buffer to prevent take of burrowing owl is not feasible, the project applicant will consult with CDFW.
- The project applicant will compensate for the loss of burrowing owl by establishing permanent protection and perpetual management on land that provides burrowing owl habitat. Habitat management lands for burrowing owl may be established by conservation easement or fee title or credits may be purchased from a CDFW-approved conservation or mitigation bank

Other Special-Status Raptors

- If habitat potentially suitable for other nesting special-status raptors (e.g., ferruginous hawk [*Buteo regalis*], golden eagle, bald eagle, northern harrier) or common raptors protected under California Fish and Game Code (e.g., red-tailed hawk, red-shouldered hawk) is identified within the area of impact or within 0.5 miles of the area of impact for golden eagle, 0.25 miles of the area of impact for bald eagle and American peregrine falcon, and 500 feet of the area of impact for all other raptors, all tree removal activities and construction activities will occur during the nonbreeding season (September 1 through January 31), if feasible.
- If tree removal or other construction activities must occur between February 1 and August 31, the implementing agency will retain a qualified biologist to conduct a preconstruction survey for nesting raptors within 0.5 miles, 0.25 miles, or 500 feet, depending on the species (see bullet above) of the area of impact no more than 7 days prior to initiation of construction.
- If no nests are detected, then further mitigation will not be required.
- If nests are detected, impacts on nesting raptors, including direct impacts and indirect impacts (e.g., noise, presence of construction crews) will be avoided by establishing appropriate buffers around active nest sites identified during preconstruction nest surveys. Factors to be considered for determining buffer size will include the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffer size may be adjusted if the qualified biologist, in consultation with CDFW, determines that such an adjustment will not be likely to adversely affect the nest. The buffer areas will be flagged for

avoidance, and no activity will occur within the buffer areas until the qualified biologist has determined, in coordination with CDFW, that the young have fledged, the nest is no longer active, or reducing the buffer would not likely result in nest abandonment. Monitoring of the nest by a qualified biologist during and after construction activities will be required if the activity has potential to adversely affect the nest.

- If bald or golden eagle nests are found during preconstruction surveys, then the nest tree will not be removed.
- Disturbance, injury, or mortality of bald eagle, California condor, golden eagle, and white-tailed kite will be completely avoided.

Western Yellow-Billed Cuckoo, Least Bell's Vireo, and Willow Flycatcher

- If habitat potentially suitable for western yellow-billed cuckoo, least Bell's vireo, or willow flycatcher is determined to be present within or in the vicinity of the area of impact, the implementing agency will retain a qualified biologist to conduct protocol-level surveys for these species following the guidance offered in *A Natural History Summary and Survey Protocol for the Western Distinct Population Segment of the Yellow-billed Cuckoo* (Halterman et al. 2016); *Least Bell's Vireo Survey Guidelines* (USFWS 2001); *A Survey Protocol for Willow Flycatcher in California* (Bombay et al. 2003) and/or current industry standards, and the implementing agencies will initiate consultation with USFWS and CDFW.
- If no nests or territories are detected, then further mitigation will not be required.
- If nests are detected, the implementing agency will establish buffers around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely affected by construction. No-disturbance buffers around active nests will be a minimum of 250 feet, unless a qualified biologist determines that smaller buffers would be sufficient to avoid impacts on nesting birds in consultation with CDFW or USFWS. Factors to be considered for determining buffer size will include: the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffers will be maintained until a qualified biologist has determined that young have fledged and are no longer reliant upon the nest or parental care for survival.

Other Special-Status Birds

- If habitat potentially suitable for other special-status nesting birds (e.g., bank swallow [*Riparia riparia*], black swift [*Cypseloides niger*], grasshopper sparrow [*Ammodramus savannarum*], loggerhead shrike; see Appendix C-2 for full list) or other native nesting birds protected under section 3503 of the California Fish and Game Code is identified within the area of impact or within 100 feet of the area of impact, all tree removal activities and construction activities will occur during the nonbreeding season (September 1–January 31), if feasible. If tree removal or other construction activities must occur between February 1 and August 31, the implementing agency will retain a qualified biologist to conduct protocol-level nest surveys within 500 feet of the area of impact no more than 7 days prior to initiation of construction.
- If no nests are detected, then further mitigation will not be required.
- If nests are detected, direct impacts and indirect impacts (e.g., noise, presence of construction crews) will be avoided by establishing appropriate buffers around active nest sites. Factors to be considered for determining buffer size will include the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; and baseline levels of noise and human activity. Buffer size may be adjusted if the qualified biologist, in consultation with CDFW or USFWS, determines that such an adjustment would not be likely to adversely affect the nest. The buffer areas will be flagged, and no activity will occur within the buffer areas until the qualified biologist has determined, in coordination with CDFW or USFWS, that the young have fledged, the nest is no longer active, or reducing the buffer would not likely result in nest abandonment. Monitoring of the nest by a qualified biologist during and after construction activities will be required if the activity has potential to adversely affect the nest.
- Disturbance, injury, or mortality of California black rail, greater sandhill crane will be completely avoided.

Special-Status Fish

- If aquatic habitat potentially suitable for special-status fish is identified within the area of impact, and construction activities could result in adverse effects on this habitat, impacts on these species will be avoided by implementing the following measures:
  - All work within waters where there is potential for Delta smelt (*Hypomesus transpacificus*) to occur, as defined in the most recent USFWS guidance, will be confined to a seasonal work window of August 1 through November 30 when Delta smelt are least likely to be present. Because this species does not regulate its movement strictly within this time frame, modification to the work windows may be approved by USFWS prior to project implementation based on information from the various in-Delta monitoring programs.
  - In-water construction activities where there is potential for steelhead and/or Chinook salmon to occur will be limited to the low-flow period between June 1 and October 1 to minimize the potential of adverse effects on federally listed anadromous salmonids during their emigration period.
  - In-channel construction activities that could affect habitat for listed anadromous salmonids will be limited to daylight hours during weekdays, leaving a nighttime and weekend period of passage for these fish species.
  - Construction best management practices for off-channel staging and storage of equipment and vehicles will be implemented to minimize the risk of contamination of streams and rivers by spilled materials. Best management practices will also include minimization of erosion and stormwater runoff, as appropriate.
  - If bank stabilization activities are necessary, then such stabilization will be constructed to minimize predator habitat, minimize erosion potential, and contain material suitable for supporting riparian vegetation.
- For federally listed species, if the final rule regarding the interpretation of the definition of take (Federal Register Vol. 90 No. 73, USFWS 2025) is approved and published prior to implementation of projects under the 2025 Blueprint EIR, instead of being required to follow the mitigation measures listed above, the project proponent will comply with the legal requirements of ESA as amended by the final rule and will provide mitigation as directed by USFWS or NOAA Fisheries (which could include the above, if directed).

Crotch's Bumble Bee

- If habitat potentially suitable for Crotch's bumble bee is identified within the area of impact, and this habitat cannot be avoided, the applicant will retain a qualified biologist familiar with bumble bees of California, and with experience using survey methods for bumble bees, to conduct focused surveys of habitat potentially suitable for Crotch's bumble bee within the project site. *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* (CDFW 2023) will be used to guide surveys.
- If no Crotch's bumble bees are not detected during focused surveys, the survey results will be submitted to the appropriate County, and no further mitigation will be required.
- If Crotch's bumble bees are detected during focused surveys, the survey results will be submitted to the lead agency, and appropriate avoidance measures will be implemented in consultation with and with approval from CDFW. Avoidance measures may include the following, if feasible:
  - Protective buffers will be implemented around active overwintering or breeding colonies until the colonies are no longer active.
  - Construction activities will occur from October through February to avoid the bumble bee flight season.
  - Construction activities, including ground disturbance, will be conducted using a phased approach, such that the entirety of the habitat is not removed at once; the objective of this measure is to provide refuge for bumble bees during project activities and temporary retention of suitable floral resources proximate to the active construction areas.

Monarch

- If habitat potentially suitable for monarch is identified in the area of impact, and this habitat cannot be avoided, the following will apply:

- If construction activities (e.g., ground disturbance, vegetation removal, staging) on the project site occur during the period when milkweed plants may host monarch eggs or caterpillars (approximately mid-March through late September, depending on elevation and other factors) a qualified biologist will survey the project site for milkweed plants.
- If milkweed plants are found, a qualified biologist will inspect the milkweed plants for the presence of monarch eggs or caterpillars no more than 14 days before plant removal. If monarch eggs or caterpillars are detected, the milkweed plants will be avoided until they are no longer being used by monarch caterpillars, as confirmed by a qualified biologist, if feasible.
- If no eggs or caterpillars are detected, no additional protection measures are necessary

- If monarch, which is currently proposed for listing, is listed under ESA, the applicant will implement the above measures in consultation with and with approval from USFWS.

Special-Status Vernal Pool Invertebrates

- If habitat potentially suitable for vernal pool invertebrate species (i.e., Conservancy fairy shrimp, midvalley fairy shrimp [*Branchinecta mesovallensis*], vernal pool fairy shrimp, vernal pool tadpole shrimp, Ricksecker's water scavenger beetle [*Hydrochara rickseckeri*]) is identified within the area of impact, and this habitat cannot be avoided, the implementing agency will retain a qualified biologist to conduct vernal pool invertebrate surveys in the area of impact and within 250 feet from the edge of the area of impact to evaluate direct and indirect effects on vernal pools in accordance with the *Programmatic Formal Endangered Species Act Consultation on Issuance of 404 Permits for Projects with Relatively Small Effects on Listed Vernal Pool Crustaceans within the Jurisdiction of the Sacramento Field Office, California* (USFWS 1996).
- Habitat Preservation: The implementing agencies will compensate for indirect effects of the project on habitat for vernal pool invertebrates at a sufficient ratio for no net loss of habitat function or acreage, by purchasing vernal pool preservation credits from a USFWS-approved conservation bank, or from another USFWS-approved conservation bank. Compensation credits will be purchased prior to any ground-disturbing activities.
- Habitat Creation: The implementing agencies will compensate for the direct effects of the project on habitat for vernal pool invertebrates at a sufficient ratio for no net loss of habitat function or acreage, by purchasing vernal pool creation credits from a USFWS-approved conservation bank, or from another USFWS-approved conservation bank.
- For seasonal wetlands and drainages that will be retained in the area of impact (i.e., those not proposed to be filled), a minimum no-disturbance buffer of at least 50 feet from these features will be implemented in the project area. The buffer area will be flagged with high visibility construction flagging prior to commencement of ground-disturbing activities and will be maintained for the duration of construction activities. All flagged areas will be avoided.
- For federally listed species, if the final rule regarding the interpretation of the definition of take (Federal Register Vol. 90 No. 73, USFWS 2025) is approved and published prior to implementation of projects under the 2025 Blueprint EIR, instead of being required to follow the mitigation measures listed above, the project proponent will comply with the legal requirements of ESA as amended by the final rule and will provide mitigation as directed by USFWS or NOAA Fisheries (which could include the above, if directed).

Valley Elderberry Longhorn Beetle

- If elderberry shrub habitat suitable for valley elderberry longhorn beetle is identified in the area of impact, the implementing agency will retain a qualified biologist to conduct surveys for valley elderberry longhorn beetle according to the protocol outlined in USFWS *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (USFWS 2017). The biologist will determine if there is a riparian area or known valley elderberry longhorn beetle records within 2,526 feet (800 meters) of the project site, and whether the project site is continuous with a historical riparian corridor.

- If the project site does not contain riparian habitat, but does contain elderberry shrubs, then the elderberry shrubs will be inspected for valley elderberry longhorn beetle exit holes. If exit holes are not present the implementing agency will consult with USFWS and will consider additional information, including occurrences of valley elderberry longhorn beetle within 800 meters of the project site, and proximity of the project site to existing and historic riparian corridors.
- If riparian habitat is present within the project site and elderberry shrubs are present within 165 feet, then it is likely that the site is occupied by valley elderberry longhorn beetle. If the project site contains riparian habitat and elderberry shrubs are not present within 165 feet, the implementing agency will consult with USFWS, as presence of riparian habitat is indicative of historic valley elderberry longhorn beetle occupancy.
- Impacts on valley elderberry longhorn beetle will be avoided and minimized by following the Conservation Measures outlined in the USFWS 2017 Framework for cases where elderberry shrubs can be retained and protected within 165 feet of the project footprint.
- If elderberry shrubs are 165 feet or more from project activities, direct or indirect impacts are not expected. Shrubs will be protected during construction by establishing and maintaining high visibility flagging at least 165 feet from the drip line of each elderberry shrub. Flagged areas will be avoided.
- If elderberry shrubs can be retained within the project footprint, project activities may occur up to 20 feet from the dripline of elderberry shrubs if precautions are implemented to minimize the potential for indirect impacts. Specifically, these minimization measures include:
    - All areas to be avoided during construction activities will be flagged as close to construction limits as possible.
    - A minimum avoidance area of at least 20 feet from the dripline of each elderberry plant will be maintained to avoid direct impacts that could damage or kill the plant.
    - A qualified biologist will provide training for all contractors, work crews, and any onsite personnel on the status of valley elderberry longhorn beetle, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for non-compliance.
    - A qualified biologist will monitor the work area at project-appropriate intervals to assure that all avoidance and minimization measures are implemented. The amount and duration of monitoring will depend on the project specifics and will be discussed with a USFWS biologist.
    - As much as feasible, all activities that could occur within 165 feet of an elderberry shrub will be conducted outside of the flight season of the valley elderberry longhorn beetle (March–July).
    - Trimming of elderberry shrubs will occur between November and February and will avoid removal of any branches or stems that are greater than or equal to 1 inch in diameter to avoid and minimize adverse effects to valley elderberry longhorn beetle.
    - Project activities, such as truck traffic or other use of machinery, will not create excessive dust on the project site, such that the growth or vigor of elderberry shrubs is adversely affected. Enforcement of a speed limit and watering dirt roadways are potential methods to minimize excessive dust creation.
    - Herbicides will not be used within the dripline of any elderberry shrub. Insecticides will not be used within 98 feet of any elderberry shrub. All chemicals will be applied using a backpack sprayer or similar direct application method. Mechanical weed removal within the dripline of any elderberry shrub will be limited to the season when adults are not active (August–February) and will avoid damaging the elderberry.
    - Erosion control will be implemented, and the affected area will be re-vegetated with appropriate native plants.
- If elderberry shrubs cannot be avoided, consultation with USFWS will be required. Conservation and minimization measures are likely to include preparation of supporting documentation that describes methods for relocation of existing shrubs and maintaining existing shrubs and other vegetation in a conservation area. All elderberry shrubs

with stems greater than 1 inch in diameter that cannot be avoided or have been adversely affected by indirect damage to stems of the entire shrub will be transplanted.

- Relocation of existing elderberry shrubs and planting of new elderberry seedlings and associated riparian species will be implemented according to the Framework (USFWS 2017). The Framework uses presence or absence of exit holes, and whether the affected elderberry shrubs are located in riparian habitat to determine the number of elderberry seedlings or cuttings and associated riparian vegetation that would need to be planted as compensatory mitigation for affected valley elderberry longhorn beetle habitat. Compensatory mitigation may include purchasing credits at a USFWS-approved conservation bank, providing on-site mitigation, or establishing and protecting habitat for valley elderberry longhorn beetle.
- If the final rule regarding the interpretation of the definition of take (Federal Register Vol. 90 No. 73, USFWS 2025) is approved and published prior to implementation of projects under the 2025 Blueprint EIR, instead of being required to follow the mitigation measures listed above, the project proponent will comply with the legal requirements of ESA as amended by the final rule and will provide mitigation as directed by USFWS or NOAA Fisheries (which could include the above, if directed).

Special-Status Bats

- If habitat suitable for bat roosts or bat colonies is identified in the area of impact that may be adversely affected by construction activities, the implementing agency will retain a qualified biologist to conduct a preconstruction bat survey no more than 14 days prior to the start of construction. The survey may include investigation of habitat for special-status bats (e.g., rocky outcrops, trees, snags, bridges, mines, caves, human-made structures) for bat use (e.g., guano), and/or an evening emergence survey. If evidence of bat use is observed, the species and number of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts.
- If no bat roosts are observed, further mitigation will not be required.
- If surveys confirm bats daytime-roost will be affected by construction activities, a Bat Exclusion Plan will be developed by the implementing agency and submitted to CDFW for review and approval prior to its implementation. No bat exclusion will occur between March 1 and August 15 (depending on location) which coincides with the maternity season in California.
- If a winter roost, a maternity roost, or any roost of a special-status bat species (i.e., pallid bat, spotted bat, Townsend's big-eared bat, western mastiff bat, western red bat) is found, a mitigation program addressing mitigation for the specific occurrence will be submitted to CDFW by the implementing agency and qualified biologist for review and approval to determine whether measures are appropriate. The mitigation plan will establish a buffer area around the colony during hibernation or while females in maternity colonies are nursing young that is large enough to prevent disturbance to the colonies.

American Badger

- If burrow habitat potentially suitable for American badger is identified within the area of impact, the implementing agency will retain a qualified biologist to conduct a preconstruction survey for American badger. The survey will be conducted no more than 30 days prior to initiation of construction and will include visual inspection (e.g., direct observation, monitoring, trail camera) of suitable burrows to determine whether they are occupied.
- If no occupied burrows are found, further mitigation will not be required.
- If occupied burrows are found, impacts on active badger dens will be avoided by flagging exclusion zones around all active badger dens, within which construction activities will be prohibited until denning activities are complete or the den is abandoned. The qualified biologist will monitor each den once per week to track the status of the den and to determine when it is no longer occupied.

Special-Status Forest Carnivores

- If habitat potentially suitable for wolverine, fisher, or Sierra Nevada red fox is identified in the area of impact, the implementing agency will retain a qualified biologist to conduct a preconstruction survey prior to commencement of construction activities (e.g., tree removal, ground disturbance) for these species within the area of impact and a 0.25 miles buffer of the area of impact.
- If individuals or potential or occupied dens are not found, further mitigation will not be required.
- If wolverine, fisher, or Sierra Nevada red fox are identified, or if potential dens of these species are located, an appropriate method will be used by a qualified wildlife biologist to confirm whether the den is occupied. This may involve use of remote field cameras, track plates, or hair snares. Other devices such as fiber optic scope may be utilized to determine occupancy. If the potential den is not occupied, the entrance will be temporarily blocked so that no other animals occupy the area during the construction period but only after it has been fully inspected. The blockage will be removed once construction activities have been completed.
- If a den is found to be occupied by one of these species, a no-disturbance buffer will be placed around the occupied den location. The no-disturbance buffer will include the den tree (or other structure) plus a suitable buffer as determined by the biologist in coordination with USFWS or CDFW, as appropriate depending on species status. Construction activities in the no-disturbance buffer will be avoided until the den is no longer occupied as determined by a qualified wildlife biologist in coordination with USFWS and CDFW.
- Disturbance, injury, or mortality of California wolverine will be avoided.

Northern California Ringtail

- If habitat potentially suitable for northern California ringtail is identified within the area of impact the implementing agency will retain a qualified biologist to conduct preconstruction surveys to identify individual northern California ringtails and potential nests.
- If individuals or potential or occupied nests are not found, further mitigation will not be required.
- If northern California ringtail or potential nests are found, an appropriate method will be used by the qualified biologist to confirm whether a northern California ringtail is occupying the nest (e.g., remote field cameras, track plates, hair snares, fiber optic scope).
- If a nest is determined to be occupied by a northern California ringtail, a buffer will be established around the nest tree (or other nest structure) sufficient to protect the nest from construction disturbance as determined by the qualified biologist in coordination with CDFW. No construction activities will occur within the buffer until the nest is unoccupied as determined by a qualified wildlife biologist in coordination with CDFW.
- Disturbance, injury, or mortality of northern California ringtail will be avoided.

Salt-Marsh Harvest Mouse

- If habitat potentially suitable for salt-marsh harvest mouse is identified within the area of impact or within 100 feet of the area of impact, all habitat for salt-marsh harvest mouse including pickleweed (*Arthrocnemum* spp.) will be avoided, if feasible.
- If avoidance is not feasible, pickleweed and other vegetation in habitat potentially suitable for the species will be removed by hand (i.e., with non-motorized equipment). While removal occurs, a USFWS-approved biologist will monitor in front of the vegetation removal, walking at a safe distance in front of vegetation removal equipment to ensure no salt marsh harvest mice are present. The following will also apply:
    - Prior to initiation of work activities within suitable habitat, the USWFS-approved biologist will survey the work area for the presence of salt marsh harvest mice and their nests.
    - Surveys will be repeated daily prior to the beginning project activities at the proposed project site; one or more USFWS-approved biologists will survey the proposed project site to ensure it is clear of salt marsh harvest mice.

- Project activities will be restricted to daylight hours 30 minutes after sunrise and 30 minutes before sunset.
- Project activities will avoid high tides and periods when the marsh plain is inundated.
- Additional measures for vegetation removal will apply and are as follows:
  - Vegetation removal will move in a direction toward salt marsh harvest mouse habitat and continue in a uniform direction.
  - Vegetation will be removed to bare ground or stubble no higher than 1 inch. Vegetation will be cut in at least two passes: with the first pass cutting vegetation at approximately half of its height above the ground (mid-canopy) and the next pass, or subsequent passes, cutting vegetation to ground-level or no higher than 1 inch.
  - Cut vegetation will not be piled in the area where vegetation removal is taking place (what will be the avoidance area). It will be removed from the avoidance area as it is being cut, so that no standing or cut vegetation remains in the avoidance area when flagging is installed.
- While work is occurring, flagging will be placed around the defined work area prior to the start of construction or other ground disturbing activities and immediately after vegetation removal. No project activities will occur in the flagged area.
- The USWFS-approved biologist will conduct daily surveys to ensure that the flagging is intact and that no mice have entered the project area.

- If the final rule regarding the interpretation of the definition of take (Federal Register Vol. 90 No. 73, USFWS 2025) is approved and published prior to implementation of projects under the 2025 Blueprint EIR, instead of being required to follow the mitigation measures listed above, the project proponent will comply with the legal requirements of ESA as amended by the final rule and will provide mitigation as directed by USFWS or NOAA Fisheries (which could include the above, if directed).

Special-Status Rabbits and Sierra Nevada Mountain Beaver

- If habitat potentially suitable for Sierra Nevada snowshoe hare, western white-tailed jackrabbit, and Sierra Nevada mountain beaver is identified within the area of impact, the implementing agency will retain a qualified biologist to conduct preconstruction surveys for these species. Surveys will include visual surveys for individuals and potential nests (e.g., shallow forms, cavities, depressions beneath brush).
- If individuals or potential or occupied nests are not found, further mitigation will not be required.
- If occupied nests are observed, a buffer will be established including the nest plus a suitable buffer as determined by the qualified biologist in coordination with CDFW. No construction activities will occur within the buffer until the nest is unoccupied as determined by a qualified wildlife biologist in coordination with CDFW.

Marysville California Kangaroo Rat

- If habitat potentially suitable for Marysville California kangaroo rat is identified within the area of impact or within 100 feet of the area of impact, the implementing agency will retain a qualified biologist to conduct preconstruction surveys within 60 days prior to ground disturbing construction activities. The survey will include burrow searches within 100 feet of the area of impact.
- If suitable burrows are not found, further mitigation will not be required.
- If suitable burrows for this species are identified, focused live trapping surveys may be conducted by a qualified biologist to determine whether the burrows are being used by Marysville California kangaroo rat. If live trapping is not conducted or if live-trapping survey results are inconclusive, a 50-foot buffer will be established around suitable burrows. No construction activities will occur within the buffer until the burrow is unoccupied as determined by a qualified wildlife biologist in coordination with CDFW.

Significance after Mitigation

With implementation of Mitigation Measures 3.4-1, 3.4-2, and 3.4-3, impacts on special-status species would be reduced to less than significant. If take of special-status species cannot be avoided, then compliance with USFWS or CDFW requirements for mitigation under ESA or CESA would be required, as determined by USFWS or CDFW. If impacts on special-status species cannot be avoided or reduced to a less-than-significant level with the mitigation provided above, then compensation for the loss of species would be required. Compensatory mitigation for species listed under ESA or CESA would occur at an agency approved mitigation bank or through individual mitigation locations as approved by USFWS or CDFW, as appropriate depending on species status. A mitigation and monitoring plan would be developed by the resource agencies as part of the permitting process describing how unavoidable losses of special-status wildlife species would be compensated. The mitigation and monitoring plan would include how the site will be monitored and the duration of monitoring until the mitigation is successful.

Projects taking advantage of CEQA Streamlining provisions of SB 375 (PRC Sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measure described above to address site-specific conditions, resulting in impacts that are less than significant. However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, Impact 3.4-1 would be **significant and unavoidable** for purposes of this program-level review.

Impact 3.4-2: Have a Substantial Adverse Effect on any Riparian Habitat, Sensitive Natural Community, or Other Sensitive Habitats, Including Those Identified in Local or Regional Plans, Policies, or Regulations by CDFW or USFWS

The plan area contains approximately 79,533 acres of riparian habitat (Table 3.4-1). Overall, implementation of the 2025 Blueprint could result in conversion of approximately 945 acres of riparian habitat (Table 3.4-5). Wildland cover types within the plan area also include land cover types that could support sensitive natural communities. Sensitive natural communities are those natural communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. The plan area has potential to support 128 sensitive natural communities, which include vegetation alliances and associations typically found in all wildland communities mapped in the plan area, including conifer, chaparral, oak woodland, grassland, riparian, scrub, and wetland habitats (see Appendix C-3). In addition, oak woodlands that are present in the plan area are also considered sensitive. Table 3.4-5 provides estimates of potential regional impacts on habitat resulting from the Development Pattern and planned transportation network improvements and programs intended to accommodate population growth and travel in the plan area through 2050. Although wetlands and other waters are considered sensitive habitats, these are discussed separately in Impact 3.4-3, below.

Regional Growth and Land Use Change

Implementation of the Development Pattern in the 2025 Blueprint could result in the loss of riparian habitat, sensitive natural communities, and other sensitive habitats. Projected regional growth and land use change could result in the conversion of approximately 751 acres of riparian habitat and 3,183 acres of oak woodland. In addition, implementation of the projected regional growth and land use change could result in the conversion of 22,864 acres of wildland communities that could potentially contain sensitive natural communities.

Transportation Network Improvements and Programs

Implementation of the planned transportation network improvements and programs could result in the loss of riparian habitat, sensitive natural communities, and other sensitive habitats. Planned transportation network improvements and programs could result in the conversion of approximately 195 acres of riparian habitat and 155 acres of oak woodland. In addition, implementation of the planned transportation network improvements and programs could result in the conversion of 2,923 acres of wildland communities that could potentially contain sensitive natural communities.

Class I trails that run parallel to new or expanded roadways would be captured by the 100-foot buffer around new or expanded roadway and light rail projects used to calculate potential impact acreages. Some proposed Class I trails may not be captured by the 100-foot buffer, including trails located along rivers or in other areas greater than 100

feet from new or expanded roadways. Development of these Class I trails could result in impacts on sensitive natural communities in excess of the impact acreages.

Summary

Because implementation of the Development Pattern and planned transportation network improvements and programs in the 2025 Blueprint at the regional level could result in conversion of habitats that could support sensitive natural communities, riparian habitat, and other sensitive habitats, Impact 3.4-2 would be **potentially significant**.

Mitigation Measures

SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measures or other comparable measures identified by the lead agency at a project level would reduce impacts on biological resources and agencies with jurisdiction to adopt these measures should do so (Pub. Resources Code Section 21081).

Implement Mitigation Measure 3.4-1: Conduct a Biological Resources Assessment

Mitigation Measure 3.4-4: Avoid, Minimize, and Mitigate Impacts on Riparian Habitat, Sensitive Natural Communities, and Other Sensitive Habitats

If the qualified biologist, after implementation of Mitigation Measure 3.4-1, determines that riparian habitat, sensitive natural communities, or other sensitive habitats are present within the area of impact and could be adversely affected by construction activities, then the following measures will be implemented:

- To the extent practicable, and in consideration of other design requirements and constraints (e.g., meeting primary project objectives and needs, avoidance of other sensitive resources), the implementing agency will attempt to design the proposed projects in a way that minimizes the removal of native riparian habitat, sensitive natural communities, and other sensitive habitats, particularly trees that contribute to the overstory canopy of these communities.
- The implementing agency will compensate for permanent loss of riparian habitat at a sufficient ratio, which may be achieved through a combination of on-site restoration/creation, off-site restoration, preservation, or mitigation credits. If mitigation credits are not available, stream and riparian habitat compensation will include the establishment of riparian vegetation on currently unvegetated bank portions of streams affected by the project and enhancement of existing riparian habitat through removal of nonnative species, where appropriate, and planting additional native riparian plants to increase cover, continuity, and width of the existing riparian corridor along streams on the project site and surrounding areas. Construction activities and compensatory mitigation will l include development of a Compensatory Stream and Riparian Mitigation and Monitoring Plan for creating or restoring in-kind habitat in the surrounding area. The Compensatory Stream and Riparian Mitigation and Monitoring Plan will include the following:
    - identification of compensatory mitigation sites and criteria for selecting these mitigation sites;
    - in-kind reference habitats for comparison with compensatory riparian habitats (using performance and success criteria) to document success;
    - monitoring protocol, including schedule and annual report requirements (compensatory habitat will be monitored for a minimum of 5 years from completion of mitigation, or human intervention [including recontouring and grading], or until the success criteria identified in the approved mitigation plan have been met, whichever is longer);
    - ecological performance standards, based on the best available science and including specifications for native riparian plant densities, species composition, amount of dead woody vegetation gaps and bare ground, and survivorship; at a minimum, compensatory mitigation planting sites must achieve 80 percent survival of

planted riparian trees and shrubs by the end of the 5-year maintenance and monitoring period or dead and dying trees will be replaced and monitoring continued until 80 percent survivorship is achieved;

- corrective measures if performance standards are not met;
- responsible parties for monitoring and preparing reports; and
- responsible parties for receiving and reviewing reports and for verifying success or prescribing implementation or corrective actions.

- If oak woodland habitat is removed, the implementing agency will determine if the loss of oak woodland would have a significant impact on the environment. If so, an oak woodland mitigation plan will be developed that to offset the loss of habitat acreage and function, which may be achieved through a combination of restoration/creation, preservation, or mitigation credits. At a minimum, the restoration and monitoring plan will include clear goals and objectives, success criteria, specifics on restoration/creation (e.g., plant palette, soils, irrigation), specific monitoring periods and reporting guidelines, and a maintenance plan. Oak woodland restoration or creation will be monitored for a minimum of 5 years and will be considered successful when at least 75 percent of all plantings have become successfully established. Such mitigation sites will be dedicated either in fee or as an easement in perpetuity held by a qualified agency. Guaranteed funding for maintenance of the mitigation sites will be established.
- If losses of sensitive natural communities or other habitats recognized as sensitive by CDFW (see Appendix C-3) would be substantial, then additional compensation will be provided through creating, restoring, or preserving in perpetuity in-kind communities to offset the loss of habitat function or acreage.

Significance after Mitigation

With implementation of Mitigation Measures 3.4-1 and 3.4-4, impacts on riparian habitat, sensitive natural communities, and other sensitive habitats would be reduced to less than significant. Projects taking advantage of CEQA Streamlining provisions of SB 375 (PRC Sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measure described above to address site-specific conditions, resulting in impacts that are less than significant. However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, Impact 3.4-2 remains **significant and unavoidable** for purposes of this program-level review.

Impact 3.4-3: Have a Substantial Adverse Effect on State or Federally Protected Wetlands (Including but Not Limited to Vernal Pool, Fresh Emergent Wetlands, Saline Emergent Wetlands, and Wet Meadows)

The land cover mapping in the plan area captured approximately 140,197 acres of aquatic habitat, including 62,670 acres of wetland communities and 77,527 acres of water (e.g., lakes, ponds, rivers, streams) (Table 3.4-1). Due to mapping limitations when using aerial and satellite imagery and the dynamic nature and complexity of wetland systems, additional wetlands and waters are likely to occur within the plan area that were not captured in the land cover mapping available from existing sources. These features would need to be analyzed on a project by project basis and the impact calculations presented below are likely underestimated. The projected regional growth and land use change and planned transportation network improvements and programs in the 2025 Blueprint could result in impacts on a total of 218 acres of aquatic habitat, including approximately 139 acres of wetland communities and 79 acres of water (Table 3.4-5), though as noted above, these are likely underestimated.

Regional Growth and Land Use Change

Although the quality and existing condition of the aquatic habitat throughout the plan area is not known, the projected regional growth and land use change could result in loss, fill, hydrological interruption (including dewatering) of these habitats. Projected regional growth and land use change could result in the conversion of 148 acres of aquatic communities (Table 3.4-5).

Transportation Network Improvements and Programs

As noted above, though the quality and existing condition of the aquatic habitat throughout the plan area is not known, the planned transportation network improvements and programs could also result in loss, fill, and hydrological interruption (including dewatering) of these habitats. The transportation projects could result in the conversion of 70 acres of aquatic communities (Table 3.4-5).

Class I trails that run parallel to new or expanded roadways would be captured by the 100-foot buffer around new or expanded roadway and light rail projects used to calculate potential impact acreages. Some proposed Class I trails may not be captured by the 100-foot buffer, including trails located along rivers or in other areas greater than 100 feet from new or expanded roadways. Development of these Class I trails could result in impacts on aquatic habitat in excess of the impact acreages described above.

Summary

Since implementation of the projected regional growth and land use change and planned transportation network improvements and programs could result in conversion could result in conversion of aquatic habitats, including wetlands, Impact 3.4-3 would be **potentially significant**.

Mitigation Measures

SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measures or other comparable measures identified by the lead agency at a project level would reduce impacts on biological resources and agencies with jurisdiction to adopt these measures should do so (Pub. Resources Code Section 21081).

Implement Mitigation Measure 3.4-1: Conduct a Biological Resources Assessment

Mitigation Measure 3.4-5: Avoid, Minimize, and Mitigate Impacts on Wetland and Other Waters

If the qualified biologist, after implementation of Mitigation Measure 3.4-1, determines that wetlands or other waters are present in the area of impact and could be adversely affected by construction activities, then the following measures will be implemented:

- The implementing agency will conduct a delineation of state or federally protected wetlands and submit the delineation to appropriate agencies for verification. The delineation will be conducted according to methods established in the USACE Wetlands Delineation Manual (Environmental Laboratory 1987), the Arid West Supplement (Environmental Laboratory 2008), the Western Mountains and Valley Supplement (Environmental Laboratory 2010), and state wetland procedures (California Water Board 2021 or current procedures).
- If state or federally protected wetlands are determined to be present within a project site that can be avoided, the qualified biologist will establish a buffer around wetlands and mark the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The buffer will be a minimum width of 25 feet but may be larger if deemed necessary. The appropriate size and shape of the buffer zone will be determined in coordination with the qualified biologist and will depend on the type of wetland present (e.g., stream, vernal pool, pond), the timing of project activities (e.g., wet or dry time of year), whether any special-status species may occupy the wetland and the species' vulnerability to the project activities, environmental conditions and terrain, and the project activity being implemented.
- Project activities (e.g., ground disturbance, vegetation removal, staging) will be prohibited within the established buffer. The qualified biologist will periodically inspect the materials demarcating the buffer to confirm that they are intact and visible, and wetland impacts are being avoided.
- If any waters of the United States or waters of the state are lost or degraded by the project, these shall be replaced or restored on a no-net-loss basis in accordance with the applicable USACE and California Water Board mitigation standards in place at the time of construction.

Significance after Mitigation

With implementation of Mitigation Measures 3.4-1 and 3.4-5, impacts on state or federally protected wetlands would be reduced to less than significant. Projects taking advantage of CEQA Streamlining provisions of SB 375 (PRC Sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measure described above to address site-specific conditions, resulting in impacts that are less than significant. However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, Impact 3.4-3 would be **significant and unavoidable** for purposes of this program-level review.

Impact 3.4-4: 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

There are approximately 1,032,759 acres of ECA mapped within the plan area, which consists of roughly one-quarter (26 percent) of the plan area, most of which are composed of wildland communities (see discussions in Setting and Methods and Assumptions). The wildland communities in the plan area could also include native wildlife nursery sites, such as important fawning areas for mule deer, spawning areas for native fish, or bat maternity roots. These native nursery sites are not mapped on a regional scale and will require evaluation at a project-specific level.

Implementation of the proposed 2025 Blueprint could result in conversion of a total of approximately 6,390 acres of land mapped as ECA (approximately 0.6 percent of total ECAs mapped in the plan area) which includes 4,980 acres classified as wildland, 44 classified as aquatic habitat, and 478 acres classified as agricultural (Table 3.4-7). The majority of the affected wildland and aquatic habitat within the ECA consists of grasslands and oak woodlands (Table 3.4-7).

Table 3.4-7 Essential Connectivity Area Impacts

Land Cover by Essential Connectivity Area	Regional Growth and Land Use Change Impacts	Transportation Network Improvements and Programs Impacts	Total Impact Acres
Bear River-Chaparral Hill/ Yuba River			
Grassland	8	—	**8**
Oak Woodland	6	—	**6**
Urban	2	—	**2**
Bear Slough-Browns Creek			
Grassland	18	—	**18**
Row and Field Crops	1	—	**1**
Urban	2	—	**2**
Blue Ridge/ Rocky Ridge-Capay Hills			
Row and Field Crops	5	—	**5**
Coon Creek-Bear River			
Grassland	1,638	16	**1,654**
Oak Woodland	5	25	**30**
Riparian	14	8	**22**
Water	3	—	**3**
Wetland	24	3	**27**
Orchards and Vineyards	—	19	**19**
Rice	—	5	**5**
Row and Field Crops	375	79	**454**

Land Cover by Essential Connectivity Area	Regional Growth and Land Use Change Impacts	Transportation Network Improvements and Programs Impacts	Total Impact Acres
Duck Creek North Fork-Coyote Creek			
Grassland	100	—	**100**
Oak Woodland	8	—	**8**
Riparian	3	—	**3**
Urban	20	—	**20**
Marble Valley-Sawtooth Ridge			
Conifer	3	—	**3**
Grassland	1,345	151	**1,496**
Hardwood	25	1	**26**
Oak Woodland	1,108	—	**1,108**
Chaparral	9	—	**9**
Riparian	38	3	**41**
Montane Hardwood-Conifer	6	132	**138**
Water	5	—	**5**
Row and Field Crops	3	—	**3**
Pasture	1	—	**1**
Urban	244	219	**463**
Middle Fork Cosumnes River-Big Mountain Ridge			
Conifer	1	—	**1**
Grassland	9	—	**9**
Hardwood	25	—	**25**
Chaparral	3	—	**3**
Montane Hardwood-Conifer	7	—	**7**
Stone Lake-Yolo Bypass			
Grassland	21	66	**87**
Riparian	7	1	**9**
Wetland	—	2	**2**
Row and Field Crops	—	9	**9**
Urban	13	58	**71**
Yolo Bypass-Sacramento Bypass			
Grassland	—	5	**5**
Wetland	—	7	**7**
Urban	—	33	**33**
Land Cover Total	**5,431**	**962**	**6,390**

Source: Data downloaded from CAL FIRE and Spencer et al. in 2024; Compiled by SACOG in 2025.

The majority of the proposed 2025 Blueprint impacts are concentrated in two ECAs: the Coon Creek-Bear River ECA and Marble Valley-Sawtooth Ridge ECA (Table 3.4-7). The Marble Valley-Sawtooth Ridge ECA generally follows the north and middle forks of the American River in Placer and El Dorado counties, south to Folsom Lake (Figure 3.4-3).

The Coon Creek-Bear River ECA contains part of the Bear River and is between Wheatland and Lincoln in Placer County (Figure 3.4-3).

Regional Growth and Land Use Change

The projected regional growth and land use change within the ECAs could result in fragmented habitat and isolated populations of wildlife. In some cases, fragmentation of movement corridors can have substantial adverse effects on wildlife populations such as preventing deer herds from migrating between winter and summer ranges or from accessing fawning grounds. The projected regional growth and land use changes under the proposed 2025 Blueprint could result in the conversion of approximately 5,431 acres of ECAs (Table 3.4-7).

Transportation Network Improvements and Programs

The planned transportation network improvements and programs (e.g., large roads and highways) under the proposed 2025 Blueprint are planned along existing transportation corridors, although, these actions could create barriers for dispersing wildlife. The planned transportation network improvements and programs under the proposed 2025 Blueprint could result in the conversion of approximately 962 acres of ECAs (Table 3.4-7).

Class I trails that run parallel to new or expanded roadways would be captured by the 100-foot buffer around new or expanded roadway and light rail projects used to calculate potential impact acreages. Some proposed Class I trails may not be captured by the 100-foot buffer, including trails located along rivers or in other areas greater than 100 feet from new or expanded roadways. Development of these Class I trails could result in impacts on wildlife movement corridors or native wildlife nursery sites in excess of the impact acreages described below.

Summary

Since implementation of the projected regional growth and land use change and planned transportation network improvements and programs under the proposed 2025 Blueprint at the regional level could result in conversion of habitats that contain portions of ECA that could disrupt wildlife movement or dispersal corridors, or disturb native wildlife nursery areas, Impact 3.4-4 would be **potentially significant**.

Mitigation Measures

SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measures or other comparable measures identified by the lead agency at a project level would reduce impacts on biological resources and agencies with jurisdiction to adopt these measures should do so (Pub. Resources Code Section 21081).

Implement Mitigation Measure 3.4-1: Conduct a Biological Resources Assessment

Mitigation Measure 3.4-6: Avoid, Minimize, and Mitigate Impacts on Wildlife Movement Corridors or Native Wildlife Nursery Sites

If the qualified biologist, after implementation of Mitigation Measure 3.4-1, determines that wildlife movement corridors or native wildlife nursery sites are present within the area of impact and could be adversely affected by construction activities, then the following measures will be implemented:

- Implementing agencies will design projects such that they avoid and minimize direct and indirect impacts on wildlife movement corridors and/or native wildlife nursery sites. Design considerations may include but would not be limited to the following:
  - constructing wildlife friendly overpasses, underpasses, bridges and/or culverts that are integrated with appropriate roadside fencing that prevents wildlife from going into the roadway and direct them towards crossing structures;
  - using wildlife friendly fencing;
  - limiting wildland conversions in identified wildlife corridors or native wildlife nursery sites;

- retaining wildlife friendly vegetation in and around developments; and
- avoiding the nursery or migration season for common wildlife that have important movement corridors or nursery sites in the project area during construction.

- For projects that cannot avoid significant impacts on wildlife movement corridors or native wildlife nursery areas, implementing agencies will consult with CDFW to determine appropriate measures to minimize direct and indirect impacts that could occur as a result of implementing the 2025 Blueprint and will implement measures to mitigate impacts on wildlife corridors or native wildlife nursery sites.
- For projects that require the placement of stream culverts in a fish spawning stream, the implementing agencies will consult with either USACE, NOAA Fisheries, USFWS, and CDFW, as applicable, to identify measures that will allow fish passage through the culverts.
- For projects in or adjacent to riparian corridors, project design will maximize distance of lighting from riparian corridors and direct light sources away from the riparian corridor. Night lighting of trails along riparian corridors should be avoided.

Significance after Mitigation

With implementation of Mitigation Measures 3.4-1 and 3.4-6, impacts on wildlife movement corridors and native nursery sites would be reduced to less than significant. Projects taking advantage of CEQA Streamlining provisions of SB 375 (PRC Sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measure described above to address site-specific conditions, resulting in impacts that are less than significant. However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, Impact 3.4-4 would be **significant and unavoidable** for purposes of this program-level review.

Impact 3.4-5: Conflict with Local Policies or Ordinances Protecting Biological Resources, Such as a Tree Preservation Policy or Ordinance

Regional Growth and Land Use Change/Transportation Network Improvements and Programs

Several counties and cities in the plan areas have local ordinances and policies in place to protect biological resources such as streams, sensitive vegetation communities (e.g., riparian areas), and native trees, as well as nonnative trees in urban landscapes. Some of these ordinances and policies require stream and riparian setbacks and protection of trees of certain species or sizes, and these requirements vary among municipalities.

The Development Pattern and transportation projects could result in construction within a stream or riparian setback area, protected sensitive vegetation community, or in removal of trees that are protected by local policies or ordinances. Impacts 3.4-1, 3.4-2, and 3.4-3 describe potential impacts on special-status plants, special-status wildlife, sensitive natural communities, riparian habitat, and other sensitive habitats, and wetlands and other waters. Mitigation Measures 3.4-1 through 3.4-3, 3.4-4, and 3.4-5 would mitigate these impacts to less than significant if adopted by implementing agencies.

Most of the woodland habitats in the plan area are mapped at sizes ranging from 0.50 acre up to several hundred acres. Therefore, isolated trees in rural areas and city street trees are not mapped. The Development Pattern and transportation projects in the 2025 Blueprint could result in impacts on these trees; some of which may be protected under local ordinances and policies. Additionally, trees that are protected under local ordinances and policies may not be considered special-status plant species or sensitive habitats; thus, would not benefit from implementation of Mitigation Measures 3.4-1, 3.4-2, or 3.4-4.

Similarly, streams, wetlands, and riparian areas are identified in the plan area and would benefit from implementation of Mitigation Measures 3.4-1, 3.4-4, and 3.4-5. However, local ordinances and policies may have additional requirements that exceed the requirements of these mitigation measures.

In addition, implementation of the 2025 Blueprint may also conflict with other local policies or ordinances that protect locally significant biological resources.

Summary

Since implementation of the Development Pattern and planned transportation network improvements and programs under the 2025 Blueprint could result in conflicts with local policies or ordinances protecting biological resources, Impact 3.4-5 would be **potentially significant**.

Mitigation Measures

SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measures or other comparable measures identified by the lead agency at a project level would reduce impacts on biological resources and agencies with jurisdiction to adopt these measures should do so (Pub. Resources Code Section 21081).

Implement Mitigation Measure 3.4-1: Conduct a Biological Resources Assessment

Mitigation Measure 3.4-7: Avoid, Minimize, and Mitigate for Impacts on Protected Trees and Other Biological Resources Protected by Local Ordinances

If the qualified biologist, after implementation of Mitigation Measure 3.4-1, determines that local ordinances or policies intended to protect biological resources will apply and that construction activities may result in conflicts with these ordinances or policies, then the following measures will be implemented:

- Implementing agencies will ensure project designs avoid and minimize direct and indirect impacts on protected trees and other locally protected biological resources where feasible, as defined in Section 15364 of the State CEQA Guidelines.
- At a minimum, qualifying protected trees (or other biological resources) will be replaced at ratios included in the local general plan, local policies, or city or county codes in locally approved mitigation sites.
- As part of project-level environmental review, implementing agencies will ensure that projects comply with the most recent general plans, policies, and ordinances, and conservation plans.

Significance after Mitigation

With the implementation of Mitigation Measures 3.4-1 and 3.4-7, Impact 3.4-5 would be reduced to less than significant. Projects taking advantage of CEQA Streamlining provisions of SB 375 (PRC Sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measure described above to address site-specific conditions, resulting in impacts that are less than significant. However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, Impact 3.4-5 would be **significant and unavoidable** for purposes of this program-level review.

Impact 3.4-6: Conflict with the Provisions or an Adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan

There are currently four adopted HCPs and HCP/NCCPs in the plan area: the Natomas Basin HCP, the South Sacramento HCP, Western Placer County HCP/NCCP, and Yolo HCP/NCCP. The purpose of developing an HCP or NCCP is to facilitate a permittee or project applicant in obtaining an incidental take permit from USFWS and/or an NCCPA permit from CDFW, and to develop a long-term conservation plan to protect and contribute to the conservation of covered species and natural communities in a plan area while allowing for covered activities that are compatible with other local policies and regulations. In addition to the HCP/NCCPs in the plan area, the Placer County Conservation Program, which the Western Placer County HCP/NCCP is under, also has the Western Placer CARP. The Western Placer CARP provides a programmatic framework for applicants to obtain an authorization to affect aquatic resources for covered activities within the Western Placer CARP plan area. The Western Placer CARP and the Western Placer County HCP/NCCP have consistent, complementary goals and objectives, though the Western Placer CARP has a number of additional conditions for work within the vicinity of drainages.

Regional Growth and Land Use Change/Transportation Network Improvements and Programs

For projects within the plan area of an adopted HCP or NCCP that covers multiple projects and permittees (e.g., a regional or countywide multi-species HCP/NCCP), and for activities specifically covered by the plan (i.e., covered activities) that may result in take of a species covered by the plan (i.e., covered species), an eligible applicant may obtain an incidental take permit through voluntary participation in the HCP or NCCP if plan coverage/permit issuance is available. For activities that may result in take of a listed species but are not covered under an adopted HCP or NCCP, an applicant would pursue individual project permitting (see Mitigation Measures 3.4-1b and 3.4-1c). For projects within the plan area of an adopted CARP for activities specifically covered by the plan (i.e., covered activities), the applicant may enroll to acquire coverage for the project. If project activities are not covered by the CARP, the project would pursue individual project permitting.

Under the 2025 Blueprint, individual project-related take of any state or federally listed species as well as aquatic resources would be minimized and avoided through implementation of mitigation measures (see Impact 3.4-1 and Impact 3.4-3). If an individual project under the 2025 Blueprint is located within the plan area of an adopted HCP, NCCP, or CARP and the project is considered a covered activity under the HCP, NCCP, or CARP the applicant may pursue coverage under the plan. If permitting through an adopted HCP, NCCP, or CARP is pursued, the applicant would be required to meet the permit conditions and other requirements established in the plan's Implementing Agreement, which may include (depending on the plan) submitting a complete application package, paying required fees, fulfilling any appropriate survey requirements, and complying with all applicable conservation measures. If permit conditions and requirements established in the HCP, NCCP, or CARP Implementing Agreement are not met, the project would not receive coverage and would be required to secure coverage individually.

Regardless of whether take of a listed species may occur and permitting is needed, individual projects under the 2025 Blueprint that are implemented within plan areas of adopted HCPs or NCCPs and considered covered activities under adopted HCPs or NCCPs would be required to be consistent with the plans as a condition of project approval by the approving entity (e.g., Yolo Habitat Conservancy, South Sacramento Conservation Agency Joint Powers Authority). This condition also applies to those in a CARP boundary.

Because the consistency of covered activities with an adopted HCP, NCCP, or other conservation plan is a legal requirement, implementation of projects considered covered activities under the 2025 Blueprint would not result in conflict with the provisions of adopted HCPs, NCCPs, or other approved local, regional, or state habitat conservation plans. However, individual projects under 2025 Blueprint that would not be considered covered activities under an adopted HCP, NCCP, or other conservation plan would be required to seek coverage outside of these plans for potential impacts on biological resources. Impacts on biological resources that are not mitigated through an adopted HCP, NCCP, or other conservation plan may result in conflicts with these plans.

Summary

Since some individual projects either under projected regional growth and land use change or planned transportation network improvements and programs in the 2025 Blueprint could include non-covered activities under an adopted HCP, NCCP, or other conservation plan, these projects would be required to seek coverage outside of these plans for potential impacts on biological resources. Impacts on biological resources that are not mitigated through an adopted HCP, NCCP, or other conservation plan may result in conflicts with these plans and would be **potentially significant** for Impact 3.4-6.

Mitigation Measures

SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measures or other comparable measures identified by the lead agency at a project level would reduce impacts on biological resources and agencies with jurisdiction to adopt these measures should do so (Pub. Resources Code Section 21081).

Implement Mitigation Measure 3.4-1: Conduct a Biological Resources Assessment

Implement Mitigation Measure 3.4-2: Identify Special-Status Plant Species, and Avoid, Minimize, and Mitigate Impacts

Implement Mitigation Measure 3.4-3: Identify Special-Status Wildlife and Avoid, Minimize, and Mitigate Impacts

Implement Mitigation Measure 3.4-4: Avoid, Minimize, and Mitigate Impacts on Riparian Habitat, Sensitive Natural Communities, and Other Sensitive Habitats

Implement Mitigation Measure 3.4-5: Avoid, Minimize, and Mitigate Impacts on Wetland and Other Waters

Significance after Mitigation

With implementation of Mitigation Measures 3.4-1 through 3.4-5, Impact 3.4-6 would be reduced to less than significant. Projects taking advantage of CEQA Streamlining provisions of SB 375 (PRC Sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measure described above to address site-specific conditions, resulting in impacts that are less than significant. However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, Impact 3.4-6 would be **significant and unavoidable** for purposes of this program-level review.

Impact 3.4-7: Substantially Reduce the Habitat of a Wildlife (Including Fish) Species; Cause a Wildlife (Including Fish) Population to Drop Below Self-Sustaining Levels; Threaten to Eliminate a Plant or Wildlife Community; Or Substantially Reduce the Number or Restrict the Range of an Endangered, Threatened, or Rare Species

Regional Growth and Land Use Change/Transportation Network Improvements and Programs

As described in Impacts 3.4-1, 3.4-2, 3.4-3, and 3.4-4, implementation of the projected regional growth and land use change and planned transportation network improvements and programs under the 2025 Blueprint would adversely affect special-status (e.g., endangered, rare, threatened) plant and wildlife species, as well as habitat for these species, including sensitive natural communities, riparian habitat, aquatic habitat, and other sensitive habitats.

Habitat that is potentially suitable for foraging, breeding, and sheltering for common native bird, mammal, amphibian, reptile, and other wildlife species is ubiquitous throughout the plan area. These common species do not meet the criteria for special-status species as defined in this EIR; however, mandatory findings of significance pursuant to State CEQA Guidelines Section 15065(a)(1) require consideration of whether a project would "substantially degrade the quality of the environment, reduce habitat of wildlife species, cause wildlife populations to drop below self-sustaining levels, or threaten to eliminate a plant or animal community."

Due to the numerous common wildlife species distributed throughout the plan area, implementation of the Development Pattern and transportation projects could disturb or otherwise affect many common native species. Additionally, some common wildlife species are subject to state or federal regulatory protections. For example, native nesting birds are protected under sections 3503 and 3503.5 of the California Fish and Game Code and the MBTA.

Effects on individual wildlife as a result of the Development Pattern and transportation projects described previously for Impact 3.4-1 (special-status species), Impact 3.4-2 (sensitive natural communities and other sensitive habitats), Impact 3.4-3 (state or federally protected wetlands) and Impact 3.4-4 (wildlife movement and nursery sites of common species) would generally be the same for common wildlife species. Temporary disturbances to foraging patterns, local movements, and reproductive activities of common bird, mammal, reptile, and amphibian species resulting from construction and operation under the 2025 Blueprint would occur in some locations. While common wildlife species are generally well-distributed, abundant, and adapted to varying levels of natural and anthropogenic disturbances, temporary disturbances and displacement of wildlife associated with implementation of the 2025 Blueprint could occur locally.

Summary

Since implementation of the projected regional growth and land use change and planned transportation network improvements and programs under the 2025 Blueprint at the regional level would result in potential impacts on common wildlife species, including temporary disturbances and displacement, Impact 3.4-7 would be **potentially significant**.

Mitigation Measures

SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measures or other comparable measures identified by the lead agency at a project level would reduce impacts on biological resources and agencies with jurisdiction to adopt these measures should do so (Pub. Resources Code Section 21081).

Implement Mitigation Measure 3.4-1: Conduct a Biological Resources Assessment

Implement Mitigation Measure 3.4-2: Identify Special-Status Plant Species, and Avoid, Minimize, and Mitigate Impacts

Implement Mitigation Measure 3.4-3: Identify Special-Status Wildlife and Avoid, Minimize, and Mitigate Impacts

Implement Mitigation Measure 3.4-4: Avoid, Minimize, and Mitigate Impacts on Riparian Habitat, Sensitive Natural Communities, and Other Sensitive Habitats

Implement Mitigation Measure 3.4-5: Avoid, Minimize, and Mitigate Impacts on Wetland and Other Waters

Significance after Mitigation

With implementation of Mitigation Measures 3.4-1 through 3.4-5, Impact 3.4-7 would be reduced to less than significant. Projects taking advantage of CEQA Streamlining provisions of SB 375 (PRC Sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measure described above to address site-specific conditions, resulting in impacts that are less than significant. However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, Impact 3.4-7 would be **significant and unavoidable** for purposes of this program-level review.

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3.5 CULTURAL RESOURCES

This section analyzes and evaluates the potential impacts of the 2025 Blueprint on known and unknown cultural resources. In the following evaluation, cultural resources include districts, sites, buildings, structures, or objects generally older than 50 years and considered to be important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. They include precontact resources and historic-period resources.

Archaeological resources are locations where human activity has measurably altered the earth or left deposits of pre-contact or historic-period physical remains (e.g., stone tools, bottles, former roads, house foundations). Historical (or built environment) resources include standing buildings (e.g., houses, barns, outbuildings, cabins) and intact structures (e.g., dams, bridges, roads, districts), or landscapes. A cultural landscape is defined as a geographic area (including both cultural and natural resources and the wildlife therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.

One comment letter regarding cultural resources was received from the Native American Heritage Commission (NAHC) in response to the notice of preparation, which is addressed in the Section 3.17, "Tribal Cultural Resources." Appendix A includes all comments received during the scoping period.

3.5.1 Regulatory Setting

FEDERAL

Department of Transportation Act of 1966

Section 4(f) of the US Department of Transportation (DOT) Act, as amended and recodified in 1983 (49 US Code [USC] Section 303), is triggered by projects funded or approved by a DOT agency, including the Federal Highway Administration, Federal Transit Administration, Federal Railroad Administration, and Federal Aviation Administration. Section 4(f) requires a comprehensive evaluation of all environmental impacts resulting from projects that involve the use, or interference with use, of the following types of land:

- publicly owned park lands that are open to the public;
- publicly owned recreation areas that are open to the public;
- publicly owned wildlife and waterfowl refuges that are open to the public; and
- publicly or privately owned historic sites of federal, state, or local significance that are eligible for listing in or are listed in the National Register of Historic Places (NRHP).

This evaluation, called the Section 4(f) statement, must be completed by proponents of federal-aid transportation projects that affect Section 4(f) protected land, as defined above. In order to proceed with use of the above-referenced lands, the evaluation must be sufficiently detailed to permit the US Secretary of Transportation to determine that:

- there is no feasible and prudent alternative to the use of such land;
- the program or project includes all possible planning to minimize harm to any park, recreation area, wildlife and waterfowl refuge, or historic site that would result from the use of such lands; and
- if there is a feasible and prudent alternative, a proposed project using Section 4(f) protected lands cannot be approved by the Secretary; or if there is no feasible and prudent alternative, the proposed project must include all possible planning to minimize harm to the affected lands.

Detailed inventories of the locations and likely impacts on resources that fall into the Section 4(f) category are required in project-level environmental assessments.

In August 2005, Section 4(f) was amended under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users to simplify the process and approval of projects that have only de minimis impacts on lands protected by Section 4(f). Under these provisions, the US Secretary of Transportation may find such a de minimis impact if consultation with the State Historic Preservation Officer (SHPO) under Section 106 of the National Historic Preservation Act (NHPA) results in a determination that a transportation project will have no adverse effect on the historic site or that there will be no historic sites (i.e., historic properties) affected by the proposed action. In this instance, analysis of avoidance alternatives of Section 4(f) protected properties is not required and the Section 4(f) evaluation process is complete.

National Historic Preservation Act of 1966

NHPA, as amended (16 USC Section 470 et seq.), is the primary federal law governing the preservation of cultural and historic resources in the United States. The NHPA establishes the federal government policy on historic preservation and the programs through which this policy is implemented. Section 106 of the NHPA (16 USC Section 470f) requires federal agencies to take into account the effects of their undertakings on any district, site, building, structure, or object that is included in or determined eligible for inclusion in the NRHP and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings (36 Code Federal Regulations [CFR] Section 800.1).

As defined in 36 CFP Section 800.16(y), a federal undertaking means a "project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license or approval."

Specific regulations regarding compliance with Section 106 of the NHPA 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 according to statute. The Section 106 process is a consultation process that involves the SHPO throughout; the process also calls for including Native American tribes and interested members of the public, as appropriate, throughout the process. Implementing regulations for Section 106 (36 Code of Federal Regulations [CFR] Section 800) detail the following five basic steps.

1. initiate the Section 106 process;
2. identify and evaluate historic properties (per 36 CFP Section 800.16[1], a "historic property" is a property that is listed in, or eligible for listing in, the NRHP);
3. assess the effects of the undertaking on historic properties within the area of potential effects;
4. if historic properties are subject to adverse effects, the federal agency, the SHPO, and any other consulting parties (including Native American tribes) continue consultation to seek ways to avoid, minimize, or mitigate the adverse effects. A memorandum of agreement (MOA) is usually developed to document the measures agreed upon to resolve the adverse effects; and
5. proceed in accordance with the terms of the MOA.

Section 106 of the NHPA does not apply to paleontological resources unless they are found in a culturally related context (e.g., fossilized marine shell in association with a human burial). In addition to the Antiquities Act (16 USC Sections 431–433) of 1906, the preservation and salvage of fossils and other paleontological resources can be protected under the National Registry of Natural Landmarks (16 USC Sections 461–467) and NEPA, which directs federal agencies to "preserve important historic, cultural, and natural aspects of our national heritage."

Section 110 of the NHPA requires federal agencies to assume the responsibility for the preservation of historic properties under their jurisdiction or control. Section 110(f) of the NHPA, as codified at 36 CFR Section 800.10, requires federal agencies to undertake planning and actions necessary to minimize harm to any designated National Historic Landmark (NHL). If a proposed project is found to have the potential to adversely affect an NHL, the Secretary of the Interior (typically represented by a representative of the National Park Service) is invited to participate in the consultation.

National Register of Historic Places

The NRHP is the nation's master inventory of known historic properties. It is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

The formal criteria (36 CFR 60.4) for determining NRHP eligibility are as follows:

1. the property is at least 50 years old (however, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);
2. it retains integrity of location, design, setting, materials, workmanship, feeling, and associations; and
3. it possesses at least one of the following characteristics:

   Criterion A Is associated with events that have made a significant contribution to the broad patterns of history (events).

   Criterion B Is associated with the lives of persons significant in the past (persons).

   Criterion C Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant, distinguishable entity whose components may lack individual distinction (architecture).

   Criterion D Has yielded, or may be likely to yield, information important in prehistory or history (information potential).

For a property to retain and convey historic integrity, it must possess most of the seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. Location is the place where the historic property was constructed or the place where a historic event occurred. Integrity of location refers to whether the property has been moved since its construction. Design is the combination of elements that create the form, plan, space, structure, and style of a property. Setting is the physical environment of a historic property that illustrates the character of the place. Materials are the physical elements that were combined or deposited during a particular period and in a particular pattern or configuration to form a historic property. Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. Feeling is a property's expression of the aesthetic or historic sense of a particular period. This intangible quality is evoked by physical features that reflect a sense of a past time and place. Association is the direct link between the important historic event or person and a historic property. Continuation of historic use and occupation helps maintain integrity of association.

Listing in the NRHP does not entail specific protection or assistance for a property, but it does guarantee consideration in planning for federal or federally assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. In addition, project effects on properties listed in the NRHP must be evaluated under CEQA.

The National Register Bulletin series was developed to assist evaluators in the application of NRHP criteria. For example, National Register Bulletin #36 provides guidance in the evaluation of archaeological site significance. If a property cannot be placed within a particular theme or time period, and thereby lacks "focus," it will be unlikely to possess characteristics that would make it eligible for listing in the NRHP.

STATE

California Register of Historical Resources

All properties in California that are listed in or formally determined eligible for listing in the NRHP are also listed in the California Register of Historical Resources (CRHR). The CRHR is a listing of State of California resources that are significant in the context of California's history. It is a Statewide program with a scope and with criteria for inclusion similar to those used for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR.

California Historical Landmarks—buildings, structures, sites, or places that have been determined to have statewide historical significance—are also automatically listed in the CRHR. California Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance. Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR.

A historical resource must be significant at the local, state, or national level under one or more of the criteria defined in California Code of Regulations (CCR) Title 15, Chapter 11.5, Section 4850 to be included in the CRHR. The CRHR criteria are tied to CEQA because any resource that meets the criteria listed below is considered a significant historical resource under CEQA. As noted above, all resources listed in or formally determined eligible for listing in the NRHP are automatically listed in the CRHR.

The CRHR uses four evaluation criteria:

Criterion 1. Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or to the cultural heritage of California or the United States.

Criterion 2. Is associated with the lives of persons important to local, California, or national history.

Criterion 3. Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of a master; or possesses high artistic values.

Criterion 4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

Similar to the NRHP, a historical resource must meet one of the above criteria and retain integrity to be listed in the CRHR. The CRHR uses the same seven aspects of integrity used by the NRHP.

California Historical Landmarks

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource also must be approved for designation by the county board of supervisors or city council in whose jurisdiction it is located; be recommended by the State Historical Resources Commission; and be officially designated by the Director of CSP.

To be eligible for designation as a CHL, a resource must meet at least one of the following criteria:

- be the first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California);
- be associated with an individual or group having a profound influence on the history of California; or
- be a prototype of, or an outstanding example of, a period, style, architectural movement or construction, or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer or master builder.

The effects of designation as a CHL include limited protection, whereas environmental review may be required under CEQA if the property is threatened by a project. CHLs from No. 770 onward are automatically listed in the CRHR. In addition, the local assessor may enter into a contract with the property owner for property tax reduction in accordance with the Mills Act of 1972 (Gov. Code Section 50280 et seq.).

California Points of Historical Interest

California Points of Historical Interest (PHIs) are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. No historical resource may be designated as both a CHL and a PHI. If a PHI is subsequently granted status as a CHL, the PHI designation will be retired.

To be eligible for designation as a PHI, a resource must meet at least one of the following criteria:

- be the first, last, only, or most significant of its type within the local geographic region (city or county);

- be associated with an individual or group having a profound influence on the history of the local area; or
- be a prototype of, or an outstanding example of, a period, style, architectural movement or construction, or be one of the more notable works or the best surviving work in the local region of a pioneer architect, designer or master builder.

The effects of designation as a PHI include limited protection, whereas environmental review may be required under CEQA if the property may be impacted by a project. Points designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR.

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on "historical resources" and "unique archaeological resources." Pursuant to Public Resources Code (PRC) Section 21084.1, 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." Section 21083.2 requires agencies to determine whether projects would have effects on unique archaeological resources.

Historical Resources

"Historical resource" is a term with a defined statutory meaning (PRC Section 21084.1; State CEQA Guidelines Sections 15064.5[a] and [b]). Under State CEQA Guidelines Section 15064.5(a), historical resources include the following:

1) A resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in, the CRHR is considered a historical resource (PRC Section 5024.1).
2) A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3) Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the CRHR (PRC Section 5024.1).
4) The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC Section 5020.1[k]), or not identified in a historical resources survey (meeting the criteria in PRC Section 5024.1[g]) does not preclude a lead agency from determining that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

Unique Archaeological Resources

CEQA also requires lead agencies to consider whether projects would affect unique archaeological resources. PRC Section 21083.2(g) states that "unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following criteria:

1. Contains information needed to answer important scientific research questions, and there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Public Resources Code Section 21083.2

Treatment options under PRC Section 21083.2(b) to mitigate impacts to archaeological resources include activities that preserve such resources in place in an undisturbed state. PRC Section 21083.2 states:

(a) As part of the determination made pursuant to Section 21080.1, the lead agency shall determine whether the project may have a significant effect on archaeological resources. If the lead agency determines that the project may have a significant effect on unique archaeological resources, the environmental impact report shall address the issue of those resources. An environmental impact report, if otherwise necessary, shall not address the issue of nonunique archaeological resources. A negative declaration shall be issued with respect to a project if, but for the issue of nonunique archaeological resources, the negative declaration would be otherwise issued.

(b) If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:

    (1) Planning construction to avoid archaeological sites.

    (2) Deeding archaeological sites into permanent conservation easements.

    (3) Capping or covering archaeological sites with a layer of soil before building on the sites.

    (4) Planning parks, greenspace, or other open space to incorporate archaeological sites.

(c) To the extent that unique archaeological resources are not preserved in place or not left in an undisturbed state, mitigation measures shall be required as provided in this subdivision.

(d) Excavation as mitigation shall be restricted to those parts of the unique archaeological resource that would be damaged or destroyed by the project.

(e) In no event shall the amount paid by a project applicant for mitigation measures required pursuant to subdivision (c) exceed the following amounts:

    (1) An amount equal to one-half of 1 percent of the projected cost of the project for mitigation measures undertaken within the site boundaries of a commercial or industrial project.

    (2) (An amount equal to three-fourths of 1 percent of the projected cost of the project for mitigation measures undertaken within the site boundaries of a housing project consisting of a single unit.

    (3) If a housing project consists of more than a single unit, an amount equal to three-fourths of 1 percent of the projected cost of the project for mitigation measures undertaken within the site boundaries of the project for the first unit plus the sum of the following:

        (A) Two hundred dollars ($200) per unit for any of the next 99 units.

        (B) One hundred fifty dollars ($150) per unit for any of the next 400 units.

        (C) One hundred dollars ($100) per unit in excess of 500 units.

(f) Unless special or unusual circumstances warrant an exception, the field excavation phase of an approved mitigation plan shall be completed within 90 days after final approval necessary to implement the physical development of the project or, if a phased project, in connection with the phased portion to which the specific mitigation measures are applicable. However, the project applicant may extend that period if he or she so elects. Nothing in this section shall nullify protections for Indian cemeteries under any other provision of law.

Public Resources Code, Section 5024

The California State Legislature enacted PRC Section 5024 and 5024.5 as part of a larger effort to establish a state program to preserve historical resources. These sections of the code require state agencies to take a number of actions to ensure preservation of state-owned historical resources under their jurisdictions. These actions include

evaluating resources for NRHP eligibility and CHL eligibility, maintaining an inventory of eligible and listed resources, and managing these historical resources so that that they will retain their historic characteristics.

PRC Section 5024(f) requires state agencies to submit to the SHPO for comment documentation for any project having the potential to affect historical resources under its jurisdiction listed in or potentially eligible for inclusion in the NRHP, or are registered or eligible for registration as California Historical Landmarks. The SHPO has 30 days after receipt of the notice for review and comment.

Public Resources Code, Section 5097

PRC Section 5097 specifies the procedures to be followed if human remains are unexpectedly discovered on nonfederal land. The disposition of Native American burials falls within the jurisdiction of NAHC. Section 5097.5 of the code states:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

California Government Code Section 27288.2

California Government Code Section 27288.2 requires the county recorder for which historical resources reside to record a certified resolution establishing a historical resources designation issued by the State Historical Resources Commission or a local agency. For previously designated properties, the county may record the certified resolution establishing the historical resources designation upon submission.

State Historic Building Code

The State Historic Building Code (Health & Safety Code Sections 18950–18961) provides alternative regulations and standards for the rehabilitation, preservation, restoration (including related reconstruction), or relocation of qualified historical buildings or structures. These alternative standards and regulations are intended to facilitate the rehabilitation, restoration, or change of occupancy so as to preserve their original or restored architectural elements and features, to encourage energy conservation and a cost-effective approach to preservation, and to provide for the safety of the building occupants.

LOCAL

General Plans

Many cities and counties include cultural resource preservation policies in their general plans that include some mechanism for protecting cultural resources in those communities. Cultural resources are generally discussed in the Open Space Element, the Conservation Element, or a Preservation Element of a general plan. In general, the sections pertaining to pre-contact and historic archaeological and historic built environment resources address identification and maintenance and afford cultural resources a measure of local protection. Policies regarding cultural resources are typically similar throughout the plan area and call for the identification, protection, interpretation and enhancement of important historical, archaeological, and cultural resources and their contributing environments. The policies outlined in the applicable city or county general plans should be consulted during the early planning stages of any individual project.

3.5.2 Environmental Setting

The following summarizes the region's precontact and historic setting and the known cultural resources.

REGIONAL PRE-CONTACT SETTING

The framework that provides the foundation for the entire pre-contact record of the plan area in the Sacramento Valley, adjacent Coast Ranges and Sierran foothills, and Sierra Nevada mountains in El Dorado, Placer and Yuba counties is divided into three broad temporal periods that each reflect similar cultural characteristics: Paleo-Indian, Archaic, and Late Pre-contact. The Archaic is further divided into the Lower, Middle, and Upper Archaic based on radiocarbon dates, although the timing varies regionally for each period. This understanding of the pre-contact period of the plan area is based on archaeological research conducted by scholars from the 1930s onward and on well-regarded syntheses of California archaeology and projectile point types (Justice 2002; Moratto 1984; Rondeau et al. 2007), Central Valley archaeology (Fredrickson 1973, 1974, and 1994; Rosenthal et al. 2007), and north-central Sierran region archaeology (Elston et al. 1977 and 1994; Jackson et al. 1994; Rosenthal 2002).

The earliest accepted archaeological evidence of human occupation during the Paleo-Indian Period (11,550–8550 cal [calibrated] B.C.; calibration is used to convert the laboratory determination of carbon-dated materials to calendar years) is relatively sparse and scattered throughout the state. Although Fluted Clovis-like projectile points associated with the Paleo-Indian Period have been found in the Coast Ranges, the Central Valley, and the Sierra Nevada, none have been confirmed in the plan area. The subsequent Lower Archaic Period (8550–5550 cal B.C.) is represented mainly by isolated stemmed projectile points or chipped stone crescents, with only a few archaeological sites dating to this period known from the foothills and the southern Central Valley. Similarly, few projectile points have been identified on the western slope of the north-central Sierran region that date to the Lower Archaic Period. Little evidence exists in the Central Valley prior to the Middle Archaic Period (5550–550 cal B.C.) due mainly to periodic episodes of alluvial fan and floodplain deposition during the end of the Pleistocene (approximately 9050 cal B.C.) and at the beginning of the early Middle Holocene (approximately 5550 cal B.C.) that either destroyed or buried Paleo-Indian and Lower Archaic Period archaeological sites (Rondeau et al. 2007; Rosenthal 2002; Rosenthal and McGuire 2004; Rosenthal et al. 2007).

Archaeological sites dating to the Middle Archaic Period (5550–550 cal B.C.) are relatively scarce on the valley floor, but more common in the foothills, particularly in buried contexts between circa 4050 and 2050 cal B.C. Middle Archaic sites from the later portion of the period, less than 4,500 years ago, are more common in the Central Valley and Sierra Nevada mountains. The archaeological assemblages indicate populations were increasingly sedentary, as shown by refined and specialized tool assemblages and features, evidence of basketry, a wide range of non-utilitarian artifacts, and objects obtained through an established coastal and trans-Sierran trade network. These groups consumed a variety of animals, plants, and fish and followed a seasonal foraging strategy that generally entailed movements between the uplands in the spring and summer and lower elevations in the fall and winter (Elston et al. 1977 and 1994; Fredrickson 1973, 1974, and 1994; Jackson et al. 1994; Moratto 1984; Rosenthal et al. 2007).

After 2,700 years, during the Upper Archaic Period (550 cal B.C.–cal A.D. 1100), early human access to more specialized technology resulted in innovations with new types of shell beads, bone tools, ceremonial blades, and charmstones. This period is better represented and understood than the previous time periods. Regional variation in subsistence practices focused on seasonally available resources that were harvested and processed in bulk (e.g., acorns, salmon, shellfish, rabbits, and deer). The archaeological record in the Central Valley reflects a heavy reliance on acorns. In the lower Sacramento Valley and Delta region, large mounded villages developed that included accumulations of habitation debris and features (e.g., hearths, rock-lined ovens, house floors, and burials). It also appears that valley people periodically colonized riparian and other well-watered foothill habitats. Additionally, the distribution of obsidian and coastal shell beads and ornaments, as well as projectile points diagnostic of high Sierran manufacture that have been found along the American River corridor in Foresthill, Auburn and Rocklin in Placer County and in Hawver Cave in El Dorado County, indicate exchange of commodities continued to be widespread (Elston et al. 1977 and 1994; Fredrickson 1973, 1974, and 1994; Hull 2007; Jackson et al. 1994; Justice 2002; McGuire 2007; Moratto 1984; Rosenthal et al. 2007).

There is a greater diversity and number of artifacts and archaeological sites in the plan area from the last 1,000 years during the Late Prehistoric Period (cal A.D. 1100 to Historic Contact). An increase in population and sedentism of the population led to the development of social stratification, with an elaborate ceremonial and social organization. Large

villages and smaller satellite communities developed along the major tributaries in the valley and foothills. At some valley and foothills sites, the archaeological deposits preserved house floors or other structural remains. The occurrence of flanged tubular pipes and baked clay effigies representing humans and animals are examples of items associated with ceremonials and rituals. The Late Prehistoric Period was also shaped by a number of cultural innovations (e.g., the bow and arrow, bone fish hooks, and harpoons). In addition, in some parts of the lower Sacramento Valley, archaeological assemblages from this period include a local form of pottery known as Cosumnes Brownware. The extensive exchange networks present during this period were facilitated by the use of clamshell disk beads as a form of currency. The cultural patterns typical of the Late Prehistoric Period also begin to reflect the cultural traditions known from historic period Native American groups (Elston et al. 1977 and 1994; Fredrickson 1973, 1974, and 1994; Jackson et al. 1994; Moratto 1984; Rosenthal et al. 2007). For further discussion of indigenous populations and the contemporary Native American setting, refer to Section 3.17, "Tribal Cultural Resources."

HISTORIC SETTING

Early Exploration and Settlement

Spanish Period (1769–1822)

The Spanish were the earliest European explorers to enter and claim what would become the state of California. Between 1769 and 1823, 21 missions were established by the Spanish and the Franciscan Order along the coast between San Diego and San Francisco. Between 1806 and 1813, Spanish expeditions into the Central Valley led by Lieutenant Gabriel Moraga explored along the main rivers (e.g., American, Calaveras, Cosumnes, Feather, Merced, Mokelumne, Sacramento, San Joaquin, and Stanislaus). The last Spanish expedition into California's interior was led by Luis Arguello in 1817 and traveled up the Sacramento River, past the future site of the City of Sacramento to the mouth of the Feather River, before returning to the coast (Beck and Haase 1974; Gunsky 1989; Hoover et al. 2002).

Mexican Period (1822–1848)

After the end of the Mexican Revolution (1810–1821) against the Spanish crown, the Mexican Period is marked by an extensive era of land grants, most of which were in the interior of the state, as well as by exploration by American (i.e., United States citizens) fur trappers west of the Sierra Nevada Range. The first American trapper to enter California, Jedediah Smith, explored along the Sierra Nevada in 1826, and in 1827 he entered the Sacramento Valley, traveling along the American and Cosumnes rivers. Other trappers soon followed, including employees of the Hudson's Bay Company in 1832. By the mid-1840s, a number of American settlers had arrived in California via overland routes (Gunsky 1989; Hoover et al. 2002).

Most of the land grants to Mexican citizens in California (Californios) were in the interior since the Mexican Republic sought to increase the population away from the more settled coastal areas where Spanish settlements had been concentrated. One of the largest land grants in the Sacramento Valley was awarded to John Augustus Sutter after he became a Mexican citizen. In 1839, he founded a trading and agricultural empire called New Helvetia that was headquartered at Sutter's Fort near the divergence of the Sacramento and American rivers in today's City of Sacramento. Only a small portion of the 48,839-acre New Helvetia land grant was located in Sacramento County. The majority of land covered by the grant was located in present-day Sutter and Yuba counties, straddling the east and west sides of the Feather River. Within the six-county plan area, Mexican land grants were also awarded in Yolo and Placer counties, but not El Dorado County (Beck and Haase 1974; Hoover et al. 2002).

American Period (1848–Present)

The American Period was initiated in February 1848 with the signing of the Treaty of Guadalupe Hidalgo, which ended the Mexican-American War (1846–1848), and California became a territory of the United States. Gold was discovered at Sutter's Mill on the American River in Coloma the same year, and by 1849 nearly 90,000 people had journeyed to the gold fields. In 1850, largely as a result of the Gold Rush, California became the thirty-first state. Known today as the "Golden State," California continues to pay tribute to its Gold Rush heritage and to its fields of golden poppies, the state flower (California State Library 2019; Hoover et al. 2002).

Thousands of settlers and immigrants continued to pour into the state, particularly after the completion of the transcontinental railroad in 1869. Subsequent settlement of the American West was also encouraged by the passage of the Swampland Acts of the mid-1800s to early 1900s and the Homestead Act of 1862, among others. The availability of a reliable supply of water was a critical component of successful farm and ranch homesteading and the related growth of riverside towns. Settlements and towns that served the needs of the farming and ranching homesteads were typically established at river crossing points by trails or roadways, and many became important commercial centers for trade and transport (Beck and Haase 1974; Caltrans 2006 and 2007; Hoover et al. 2002).

As gold mining declined, cattle and sheep ranching and agriculture assumed a more prominent role in the state's economy. The vast Central Valley's climate and fertile soil, plus the construction of extensive irrigation and reclamation systems, combined to produce a variety of fruits, vegetables, nuts, and grains. Population growth and changes in the landscape within the Central Valley region, including the plan area, reflect the importance of mining, the growth of agriculture and ranching, and development of the regional transportation network. A wealth of other natural resources, such as lumber and minerals, including stone and gravel, also contribute to the region's continuing growth and development.

Gold Rush Era

In January 1848, gold was discovered by James Marshall on the South Fork of the American River near present day Coloma in the foothills of Sutter County. Subsequent gold discoveries were made not long after that, such as the discovery made by Jonas Spect on the Yuba River in the vicinity of Marysville in June 1848. The onset of the Gold Rush brought thousands of people into California. Miners poured into the Sierra Nevada foothills in search of placer deposits along the rivers and creeks of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties. When the surficial placer deposits were depleted in the mid-1850s, the miners turned to other methods to reach gold-bearing strata. One of the most common methods, hydraulic mining, introduced vast quantities of rock, sand, and mud into the mountain and valley waterways and was prohibited in 1884. Beginning in 1898, mining companies used large dredges to mine gold deposits along the rivers and major creeks. Some of the tailings associated with this type of gold mining remain visible across today's landscape, particularly along the American, Yuba, and Cosumnes rivers in the plan area. During and after the Gold Rush era from (1848–1855), gold-seekers also turned to hard-rock mining, digging underground tunnels to follow the gold-bearing quartz veins in the Mother Lode (Caltrans 2008; Hoover et al. 2002).

The Gold Rush of 1848 to 1855 triggered the spread of new camps and towns across the Mother Lode and the rich mining region north of the Mother Lode, the flourishing of riverside supply centers like the cities of Sacramento and Marysville, and the development of transportation networks for hauling freight, mail, consumer goods, and passengers. The increasing demand for food and commodities by the miners boosted the expansion and success of the agricultural industry, and increased cattle and sheep ranching and poultry production. Lumber production, the manufacture of clothing and dry goods, the ore processing industry, and the beginning of a fishing industry were also prompted during the Gold Rush era (Beck and Haase 1974; Hoover et. al. 2002).

The Gold Rush, and subsequent mining in the decades that followed, dramatically altered California's cultural and natural landscape, particularly portions of the Sacramento Valley and neighboring Sierra Nevada foothills. Mining also contributed to the settlement of the plan area and to the historic significance of individual communities such as the cities of Auburn and Folsom. The growth and variety of techniques employed for gold mining was accompanied by the development of water conveyance systems. In the early 1850s, ditches were dug to get water to the "dry diggings" and companies were soon organized and building ditches, canals, and flumes to supply water to miners using sluices to extract gold from the river gravels. With the advent of hydraulic mining, the demand for water increased and its supply by ditch companies became even more lucrative. By 1865, over 5,300 miles of mining ditches and canals had been officially recorded in the Mother Lode region. Of these, many are still used for agricultural irrigation, municipal water services, and hydroelectric power systems, and they remain an important feature of the region's cultural landscape (JRP and Caltrans 2000).

INDIVIDUAL COUNTY HISTORY

The following is a brief overview of the history of the plan area by county. "County" refers to the geographic area of the county and includes all land in the area, both unincorporated and incorporated.

El Dorado County

El Dorado County is one of the original 27 counties created by the California State Legislature in 1850. Originally, the county's boundaries included parts of present-day Amador, Alpine, and Placer counties. By 1919, the state adopted the current boundary lines that are marked to the east by the state of Nevada and to the west by Sacramento County. The American and Cosumnes rivers form the county's northern and southern boundaries. The original county seat was the town of Coloma, but in 1857 it was moved to Placerville where it remains to this day (Coy 1973; Hoover et al. 2002).

On January 24, 1848, James W. Marshall, an employee of John A. Sutter, discovered gold near the area of present-day Coloma. The first mining town in California sprouted soon after his discovery, and the gold region of El Dorado County experienced rapid growth. It is likely the county derives its name, El Dorado, meaning "the gilded man" in Spanish, from Marshall's discovery, as well as the gold discovered by others (Hoover et al. 2002).

Both during and for many years after the Gold Rush, gold mining was the predominant industry in El Dorado County. Large mining camps such as Placerville, El Dorado, and Diamond Springs developed into permanent towns. Other mineral products in the region include large deposits of slate, granite, lime, and asbestos, as well as building stones. By the turn of the twentieth century, lumbering, livestock raising, and farming had joined mining as the principal industries of the county. Another industry that gained popularity in El Dorado County was tourism. In the early 1900s, with the advent of the automobile, visitors increasingly traveled to the Sierra Nevada and Lake Tahoe. US Highway 50 (which was the primary route to the gold fields in 1849, known as the Placerville Road) was California's first state-sanctioned wagon road. It was incorporated into the state (and later the national) highway network during the twentieth century, when it became part of the Interstate Highway System. At present, the county's economy is heavily dependent on recreation and tourism. Eldorado National Forest, which comprises about 57 percent of the county's land base, is one of the most heavily used wilderness areas in the nation. El Dorado County has two incorporated cities, Placerville and South Lake Tahoe (which is located outside of the plan area) (California Highways 2019; Hoover et al. 2002; Phillips and Miller 1915).

Placer County

Placer County was created by the Legislature of the State of California in 1851, from portions of Sutter and Yuba counties. The county takes its name from a form of mining predominant during the Gold Rush—placer mining. The City of Auburn, one of the earliest mining towns in California, was designated the seat of justice when the county was created. Auburn continues to be the county seat today (Hoover et al. 2002).

The earliest settlement in Placer County was Sicard's Ranch, established in 1845, after Theodore Sicard obtained a Mexican land grant in 1844. The ranch became an important stopping place on the Emigrant Trail over Donner Pass to Sutter's Fort. While the population of the county was small at this time, it grew exponentially with the onset of the Gold Rush, and mining towns and camps sprouted up in various places throughout the county (Hoover et al. 2002; Lardner and Brock 1924).

For many years, the primary focus of Placer County's economy was gold mining. During the Gold Rush, placer deposits, which were easier to obtain, were mined in the rivers. Numerous mining camps lined the banks of the American River in the Folsom Mining District, many of which are now beneath Folsom Lake. As gold became more difficult to mine, miners turned to hydraulic mining. The waste gravel and silt created by hydraulic mining collected downstream, creating shallower depths prohibitive to river transportation networks, changing stream ecology, and driving levee construction to control erratic overflows. In 1884, this more industrialized and destructive form of gold mining was prohibited from discharging debris in the Sierra Nevada region by the Sawyer Decision.

In the late 1800s, Placer County's economy shifted slowly away from gold production to agriculture, timber production, and the shipping and freighting industries. The arrival of the railroad in 1864 at Roseville and Rocklin

contributed to the county's economic success since it provided access to markets east of the Sierra Nevada. Quarrying and shipping local granite via the railroad also promoted the growth of Rocklin. The production of citrus fruits became especially important during the 1880s and 1890s, while fruit packing and shipping were key county industries in the first two decades of the twentieth century. Newcastle and Loomis are examples of towns that began as mining camps, but became important hubs of the county's fruit industry, while Lincoln and Sheridan continued to support ranching and farming (Hoover et al. 2002; Lardner and Brock 1924).

Recreation and tourism also contributed to Placer County's economy. Much of central and eastern Placer County is included within the Tahoe and Eldorado National Forests, extending to the Tahoe Basin. In the 1930s, Lake Tahoe became known as a recreation center, and the area boomed as a ski resort destination after World War II. The county has five incorporated cities (i.e., Auburn, Colfax, Lincoln, Rocklin, and Roseville) within the plan area (Hoover et al. 2002).

Sacramento County

Sacramento County is one of the original 27 counties established by the California Legislature in 1850, and the City of Sacramento has always been the county seat. Spanish explorers first visited the Sacramento County region as early as the late 1700s in their search for suitable mission sites. The first American to travel through the Sacramento area was explorer and trapper Jedediah Strong Smith, who established the Sacramento Trail during the 1820s. Other explorers followed Smith's general path in the 1830s (Hoover et al. 2002).

Settlement of the Sacramento area by non-indigenous people did not begin until the late 1830s and early 1840s, when individuals such as John Sutter obtained land grants from the Mexican government. Mexican citizens generally received these grants in exchange for an agreement to protect Mexican interests in these remote interior regions. Sutter's settlement at New Helvetia (Sutter's Fort) is probably the best known of these early operations.

At its inception, Sacramento County was largely supported by commerce related to the Gold Rush and river shipping. The city of Sacramento was a central location to the foothill mining districts and served as a river transportation hub. The city had 12 stage lines by 1853 and became the state capital in 1854. After the conclusion of the Gold Rush, when agriculture in the Sacramento Valley became an important part of the economy, Sacramento County, and particularly the city of Sacramento, continued to grow. Wheat was a staple product early on, but by the twentieth century, a variety of fruits, including citrus fruits, as well as nuts, displaced it in importance. The county also experienced tremendous growth as a result of the construction of railroads in the Sacramento area. In 1856, the Sacramento Valley Railroad constructed an alignment from Sacramento to Folsom. In 1869, the transcontinental railroad was completed, linking the Sacramento region directly with markets in the east. From 1860 to 1861, the City of Sacramento was also the westernmost point of the Pony Express (Beck and Haase 1974; Hoover et al. 2002; Phillips and Miller 1915).

By the mid-twentieth century, two military bases had been constructed in the county and a major freeway, Interstate 5, ran through the heart of the old city of Sacramento. While the military bases closed in the late twentieth century, the county continued to grow in economic wealth and population. The county is unique in having a large percentage of residents who live outside the boundaries of the county's seven incorporated cities (i.e., Citrus Heights, Elk Grove, Folsom, Galt, Isleton, Rancho Cordova, and Sacramento), while much of the land outside the urban areas continues to be used for agricultural purposes (Hoover et al. 2002; Sacramento County 2011, 2017).

Sutter County

The County of Sutter, one of the original 27 counties created in 1850 by the California State Legislature, was named in honor of the famous Sacramento Valley settler and pioneer, John Augustus Sutter. Initially, the county seat was located in Auburn; however, after Auburn became the seat for Placer County in 1851, the seat was moved to the small town of Vernon (now called Verona). In 1856, the boundaries were fixed to their present locations and Yuba City was designated the county seat, where it remains to this day (Hoover et al. 2002).

The Spanish were the first Europeans to explore the region of Sutter County in the early 1800s. The first American to enter the region was Jedediah Strong Smith, who crossed the Yuba River in 1828. In late May and early June of 1846, well-known American explorer, John C. Frémont, camped in the vicinity of the Sutter Buttes (Hoover et al. 2002).

Sutter County's initial growth was a result of the influx of miners to the region during the Gold Rush. Its principal city, Yuba City, was founded during this period. John Sutter's Hock Farm, established in 1841 on the west side of the Feather River below Yuba City, prospered during this period as a cattle ranch. After the Gold Rush, the county grew slowly and its economy was focused mainly on agriculture. In 1863, county farmer William Thompson, grew the first Thompson seedless grapes, which were exhibited to the public in Marysville in 1875. The county also became known for producing an assortment of other crops, including grains, peaches, rice, and walnuts. Stock raising and dairy farming were also practiced. Along with Yuba City, Live Oak is the only other incorporated city in the county (Hoover et al. 2002; Phillips and Miller 1915; Sutter County 2008).

Yolo County

Yolo County is one of the original 27 counties created by the California State Legislature in 1850. Initially, the county's territory was nearly twice as large as it is now and included a large portion of present-day Colusa County. By 1923, the boundaries were redrawn to their current configuration. The Sacramento River spans the entire length of the county's eastern border. The county seat was changed several times, until the City of Woodland became the permanent county seat in 1862 (Coy 1973; Hoover et al. 2002).

The Spanish first explored Yolo County in 1808, sailing up the Sacramento River to present-day Sutter County. American hunters and trappers such as Jedediah Strong Smith and Ewing Young, as well as a group of Hudson's Bay Company trappers also visited the region in the early 1800s. Of the 11 Mexican land grants awarded in the county, the US government eventually confirmed only five (Hoover et al. 2002).

The California Gold Rush of the 1850s transformed Yolo County from an isolated farming community into a booming agricultural region, as disenchanted miners realized they could make greater fortunes through farming and ranching. In the 1840s and 1850s, residents of the county based their livelihood on raising livestock; however, as floods and droughts decimated their herds, farmers increasingly turned to crop farming. Early settlements were concentrated along the waterways, Cache and Putah creeks and the Sacramento River. Barley and wheat became the dominant crops in Yolo County starting in the 1860s. The first Pacific Coast salmon cannery was established in 1864 on the west side of the Sacramento River at Washington, now part of the present-day City of West Sacramento. Alfalfa, used to feed livestock and enrich the soil, was the major irrigated crop in the 1870s. Irrigation improvements in the twentieth century allowed the introduction of new crops, such as rice, into the area. In 1905, the University of California established a College of Agriculture in Yolo County. This evolved into the University of California, Davis in 1959, and its agricultural school continues to support agricultural research and education (Hoover et al. 2002; Olney 1902).

In the last half of the twentieth century, Yolo County experienced a dramatic increase in population growth within its incorporated areas due to its climate, the rural atmosphere, and nearby educational opportunities. The availability of transportation was and continues to be a major countywide asset that provides access to water, rail, air travel, and major road networks, such as Interstates 5 and 80. In addition, the Deep Water Channel to West Sacramento opened in 1963. Today, agriculture and related endeavors remain Yolo County's primary source of economic activity. Over 80 percent of the population resides in the county's four incorporated cities (i.e., Davis, West Sacramento, Winters, and Woodland) (Employment Development Department 2019; Hart 1978).

Yuba County

Yuba County is one of the original 27 counties created by the California State Legislature in 1850. At the time of its creation, the county included portions of Placer, Nevada, and Sierra counties. In 1851, Yuba County lost almost one-half of its territory when Placer and Nevada counties were created. In the following year, more of its territory was lost when Sierra County was created. The county's current boundary with the Feather and Bear rivers as its western and southern borders was shaped in 1923. Marysville, the county's principal city, has been the county seat since 1850 (Coy 1973; Hoover et al. 2002).

As early as 1808, the Spanish were the first Europeans to enter the territory of what is now Yuba County. In the 1830s, hunters and trappers from the Hudson's Bay Company also periodically penetrated the region. In 1846, American explorer, John C. Frémont, wrote a detailed account of the Maidu (Nisenan) inhabitants (Hoover et al. 2002).

The first Euro-American settlements in Yuba County were established just a few years before Frémont's visit, after John A. Sutter took control of the territory in 1841. In 1842, Theodore Cordua leased a portion of land from Sutter. An employee of Cordua's, Charles Cuvillaud, eventually purchased some of Cordua's ranch. The town of Marysville was laid out on this land, which was named after Cuvillaud's wife, Mary Murphy Cuvillaud. The branch of the California Emigrant Trail over Donner Pass passed through the county and the emigrants rested and obtained supplies at Johnson's Ranch, established in 1844 and located on the Bear River near present-day Wheatland (Hoover et al. 2002).

The Gold Rush brought an influx of miners into Yuba County, and the county experienced an economic and population boom as a result. When the Gold Rush ended, the county continued to gain a portion of its income from gold-related industries. In the 1870s, Marysville foundries manufactured equipment for hydraulic mining. In the early twentieth century, after the Sawyer Decision ended hydraulic mining in 1884, extensive dredging took place along the Yuba River. Some of the early mining towns (e.g., Browns Valley, Brownsville, Camptonville, Clipper Mills, Dobbins, and Smartsville) survive today, while others were destroyed by dredge mining (Hoover et al. 2002; Kelley 1989).

For most of its history, agriculture has been an important part of Yuba County's economy. In 1845, the first wheat crop was planted in the county. From the 1850s to the 1870s, vineyards were planted, grain was produced, and livestock raising was practiced in the eastern part of the county. In the twentieth century, livestock raising continued to be important, as did cultivation of fruits and nuts. By 2017, the most important agricultural elements of Yuba County's economy were walnut, rice, prune, peach, and milk production, as well as cattle raising (Scheer 2017; Thompson & West 1879). Since 1942, the presence of Beale Air Force Base has been a source of economic importance to the county (AECOM 2011; Scheer 2017).

KNOWN RESOURCES IN THE PLAN AREA

The following section presents a broad overview of cultural resources located in the plan area. The term "cultural resources" includes archaeological sites, districts, buildings, structures, and objects generally older than 50 years and considered to be important to a culture, subculture, or community for scientific, traditional, religious, or other reason. Cultural resources are generally broken out into two types: archaeological resources and built environment resources. Archaeological resources are locations where human activity has measurably altered the earth or left deposits of precontact or historic-era physical remains (e.g., stone tools, bottles, former roads, house foundations). Built environment resources include standing buildings (e.g., houses, barns, outbuildings, cabins) and intact structures (e.g., dams, bridges, canals, levees, railroads) generally over 50 years of age. Resources that are recognized as historically or culturally significant may be determined to be a "historic property" or a "historical resource" as defined by federal law (36 CFR Section 800.16[l][1]) or state law (PRC Sections T21084.1; 14 CCR Section 15064.5a). Under state law, an archaeological site may also meet the definition of a "unique archaeological resource" (PRC Section 21083.2).

A review was conducted of the Historic Bridge Inventory for State Agency and Local Agency bridges maintained by California Department of Transportation (Caltrans) (Caltrans 2019a and 2019b). The inventory by Caltrans provides an account of bridges listed in the NRHP, bridges that are eligible for NRHP listing, bridges that may be eligible or that are ineligible for NRHP listing, and bridges that remain unevaluated. The original statewide bridge inventory was completed by Caltrans in 1986 and was updated in 2015 for bridges built between 1965 and 1974 (Caltrans 2015). The updated 2019 inventory includes subsequent evaluations required for individual bridge improvement projects. As they reach 50 years of age, bridges constructed in 1975 and later, which have not been previously evaluated, may need to be evaluated for a project by Caltrans or other lead agency.

Historic Built Environment Resources

Numerous historic built environment resources are located throughout the greater plan area. Historic built resources generally include buildings, roads, trails, bridges, canals, levees, and railroads usually associated with the historic era beginning with the first Euro-American contact and attaining at least 50 years of age. A historic district is an identifiable entity that contains elements such as a group of residential buildings that contribute to the district's historic character. In general, concentrations of historic built environment resources in the greater plan area occur:

- within historic neighborhoods and business districts;
- adjacent to transportation corridors (i.e., historic trails, highways, railroads, navigable sloughs);
- on historic ranches; and
- in areas of historic-era rock, soil, and mineral extraction.

These built environment resources are commonly associated with key historic events that occurred in the region, including the Gold Rush, hydraulic and dredge mining, agriculture, irrigation, reclamation, and transportation. Within California, thousands of built resources are currently listed in or are eligible for listing in the NRHP or the CRHR. Additional historic built environment resources have been designated as CHLs, PHIs, or as local historic resources or landmarks important to a region or community. In addition to the programs maintained at the national and state level, several local governments throughout the plan area have established listings or passed ordinances in recognition of the importance of such resources to their communities.

The Directory of Properties in the Historic Property Data File (HPD), maintained for each county by the Office of Historic Preservation (OHP), is a master list of all built environment properties that have been evaluated for their historic significance as properties that appear eligible for listing, have been determined eligible for listing, or are listed in the NRHP or CRHR. In general, listing a property in the NRHP involves submission of a formal nomination form that requires concurrence from the SHPO, the State Historical Resources Commission, and the Keeper of the National Register. Properties that are evaluated and found, with SHPO concurrence, to be eligible for listing under one or more of the NRHP criteria but are never nominated, are afforded the same protections as listed properties. Properties listed or found eligible for listing in the NRHP are also automatically eligible for listing in the CRHR. Historical resources listed in or determined eligible for listing in the CRHR may not be eligible for NRHP listing, but are afforded protection under CEQA. The HPD also includes built environment resources that have been identified as historically significant by local government agencies. Such resources are also afforded protection under CEQA. The property types listed in the HPD are typically non-archaeological in nature and encompass numerous built environment resources, with significant architectural and/or engineering features. For confidentiality reasons, OHP maintains a separate list of archaeological resources.

The HPD provided a broad overview of the number and types of significant historic built environment resources located in the plan area. Tables 3.5-1 through 3.5-4 list the number of historic districts, CHLs, PHIs, and historic bridges located within the plan area. Because the HPD is updated as new resources are continuously located through survey work and other means, and as resources generally reach 50 years of age, the following tables should not be considered final, but are the most comprehensive listing available as of January 2025, when the HPD was last updated by OHP.

Table 3.5-1 includes specific historic districts located in the plan area listed in or eligible for listing in the NRHP or CRHR and those properties recognized as historically significant by local governments. The Historic Districts listed in the table comprise resources including, but not limited to, groupings of residential buildings, structures (such as water conveyance resources), and railroad facilities. For planning purposes, it is important to keep in mind that Historic Districts are often found near downtown city cores where early commercial, industrial, and residential development has occurred. The table provides the name and general location of the Historic Districts; it does not provide a count of individual or contributing resources.

Table 3.5-1 Historic Districts Located in the Plan Area

City/Location	District Name	Listed in NRHP	Listed in CRHR	Determined Eligible for NRHP	Determined Eligible for CRHR	Recommended Eligible for NRHP CRHR	Recognized as Historically Significant by Local Government
El Dorado County							
Echo Lake	El Dorado Wall Discontinuous District		X	X			
Eldorado National Forest	West Wright's Lake Tract Historic District		X	X			

City/Location	District Name	Listed in NRHP	Listed in CRHR	Determined Eligible for NRHP	Determined Eligible for CRHR	Recommended Eligible for NRHP CRHR	Recognized as Historically Significant by Local Government
Gold Hill	Wakamatsu Tea & Silk Farm Colony District	X	X				
Placer County							
Emigrant Gap	Drum-Spaulding Historic Hydro District		X	X			
Auburn	College Way District					X	
Auburn	Crutcher Court District						X
Auburn	Hale Tract & College Tract, Hale, College Tract District						X
Auburn	Huntley Subdivision, Huntley District						X
Auburn	East Auburn, Uptown Business District						X
Dutch Flat	Dutch Flat Historic District	X	X				
Auburn	Old Auburn Historic District	X	X				
Auburn	Parkside Terrace District						X
Sacramento County							
Locke	Locke Historic District	X	X				
McClellan Air Force Base	Sacramento Air Depot Historic District		X	X			
Sacramento	Reclamation District 1000 - American River Watershed		X	X			
Sacramento	9th Street Plaza Park Historic District					X	
Sacramento	Capitol Extension District	X	X				
Sacramento	Alkali Flat North Historic District	X	X				
Sacramento	Boulevard Park	X	X				
Sacramento	Alkali Flat West Historic District	X	X				
Sacramento	Alkali Flat Central Historic District	X	X				
Sacramento	Old Sacramento Historic District	X	X				
Sacramento	Transcontinental Railroad Terminus and Shops Historic District					X	
Sacramento	Upper K Street Commercial District					X	
Walnut Grove	Walnut Grove Chinese-American Historic District	X	X				
Sacramento	R Street Corridor Historic District		X	X			
Elk Grove	Elk Grove Historic District/Old Town Elk Grove	X	X				
Walnut Grove	Walnut Grove Commercial/ Residential Historic District	X	X				

City/Location	District Name	Listed in NRHP	Listed in CRHR	Determined Eligible for NRHP	Determined Eligible for CRHR	Recommended Eligible for NRHP CRHR	Recognized as Historically Significant by Local Government
Walnut Grove	Walnut Grove Japanese-American Historic District	X	X				
Isleton	Isleton Chinese and Japanese Commercial Districts	X	X				
Sacramento	New Helvetia Historic District	X	X	X			X
Sacramento	Southside Park Historic District	X	X				
Sacramento	McKinley Park Historic District	X	X				
Sacramento	Sacramento Junior College Annex and Extensions						
Sutter County							
Live Oak	Live Oak Historic Commercial District	X	X				
Yolo County							
Woodland	Downtown Woodland Historic District	X	X				
Winters	Main Street Historic District	X	X				
Yuba County							
Marysville	Marysville Historic Commercial District	X	X				

Sources: State Historical Resources Commission 2025, National Parks Service 2025, OHP 2025a.

Note: The data in the table excludes the portions of El Dorado and Placer counties that are part of the Tahoe Regional Planning Area.

Tables 3.5-2 and 3.5-3 list by county and city the CHLs and PHIs located in the plan area. Since these are significant historical resources, each should be considered in planning processes. Some of these properties are also listed in the NRHP, and some CHLs are also listed in the CRHR.

Table 3.5-2 California Historical Landmarks Located in the Plan Area

City/Location	CHL #	Name
El Dorado County		
Placerville	141	Hangman's Tree
Placerville	142	Studebaker's Shop (site of)
Coloma	143	Marshall Monument
Kelsey	319	Marshall's Blacksmith Shop
Shingle Springs	456	Shingle Springs
Placerville	475	Old Dry Diggins - Old Hangtown Placerville
Georgetown	484	Georgetown
El Dorado	486	El Dorado (Originally Mud Springs)
Diamond Springs	487	Diamond Springs
Greenwood	521	Greenwood
Coloma	530	Gold Discovery Site
Pilot Hill	551	Site of California's First Grange Hall

City/Location	CHL #	Name
Folsom (Vicinity)	569	Mormon Island
Folsom (Vicinity)	570	Negro Hill
Folsom (Vicinity)	571	Salmon Falls
Folsom (Vicinity)	572	Condemned Bar
Clarksville	699	Mormon Tavern-Overland Pony Express Route in California
El Dorado	700	El Dorado-Nevada House (Mud Springs) Overland Pony Express Route in California
Placerville	701	Placerville - Overland Pony Express Route in California
Rescue	703	Pleasant Grove Overland Pony Express Route in California
Cedar Grove	704	Sportsman's Hall Overland Pony Express Route in California
US. Highway 50 (at Ice House Road)	705	Moore's (Riverton) - Overland Pony Express Route in California
US. Highway 50 (near Kyburz)	706	Webster's (Sugar Loaf House) - Overland Pony Express Route in California
US. Highway 50 (at Strawberry)	707	Strawberry Valley House - Overland Pony Express Route in California
Rescue	747	Coloma Road - Rescue
Coloma	748	Coloma Road - Coloma
Placerville	767	Methodist Episcopal Church
Gold Hill	815	Wakamatsu Tea and Silk Farm Colony
American River near State Route 49	1051	Mountain Quarries Railroad Bridge
Placer County		
Dutch Flat	397	Town of Dutch Flat
Forest Hill	398	Yankee Jim's
Forest Hill	399	Town of Forest Hill
Between Fowler and Newcastle	400	Virginiatown
Iowa Hill	401	Iowa Hill
Michigan Bluff	402	Town of Michigan Bluff
Emigrant Gap	403	Emigrant Gap
Auburn	404	City of Auburn
Gold Run	405	Town of Gold Run
Auburn	463	Ophir
Folsom Lake State Recreation Area	585	Pioneer Express Trail
Squaw Valley	724	Pioneer Ski Area of America, Squaw Valley
Roseville	780-1	First Transcontinental Railroad - Roseville
Rocklin	780-2	First Transcontinental Railroad - Rocklin
Newcastle	780-3	First Transcontinental Railroad - Newcastle
Auburn	780-4	First Transcontinental Railroad - Auburn
Colfax	780-5	First Transcontinental Railroad - Colfax
Soda Springs	799-2	Overland Emigrant Trail
Penryn	885	Griffith Quarry
American River near State Route 49	1051	Mountain Quarries Railroad Bridge

City/Location	CHL #	Name
Sacramento County		
Sacramento	366	Pioneer Telegraph Station
Meiss Road and Highway 16, west of Sloughhouse	439	Site of Grist Mill Built by Jared Dixon Sheldon
Prairie City Road and Highway 50	464	Prairie City
Highway 16 and Michigan Bar Road	468	Michigan Bar
Sacramento	525	Sutter's Fort
Sacramento	526	California's First Passenger Railroad
Folsom	558	Terminal of California's First Passenger Railroad
Sacramento	566	Sacramento City Cemetery
Sloughhouse	575	Sloughhouse
Sacramento	591	Sutter's Landing
Sacramento	592	New Helvetia Cemetery
Sacramento	593	Sutterville
Sacramento	594	Site of China Slough
Sacramento	595	Eagle Theater
Sacramento	596	Site of Home of Newton Booth
Sacramento	597	What Cheer House
Sacramento	598	Site of Stage and Railroad (First)
Sacramento	599	Crocker Art Gallery
Sacramento	601	Western Hotel
Sacramento	602	Ebner's Hotel
Sacramento	603	Lady Adams Building
Sacramento	604	Site of Sam Brannan House
Sacramento	605	Site of Sacramento Union
Sacramento	606	B.F. Hastings Building
Sacramento	607	Adams and Company Building
Sacramento	608	Site of Orleans Hotel
Sacramento	609	D.O. Mills Bank Building
Sacramento	610	Overton Building
Sacramento	611	Original Sacramento Bee Building
Sacramento	612	Site of Pioneer Mutual Volunteer Firehouse
Sacramento	613	Site of Congregational Church
Sacramento	614	Stanford-Lathrop Home
Folsom Powerhouse State Park	633	Old Folsom Powerhouse
Sacramento	633-2	Old Folsom Powerhouse - Sacramento Station A
Sacramento	654	Site of the First Jewish Synagogue Owned by a Congregation on the Pacific Coast
Sacramento	654-1	Chevra Kaddisha (Home of Peace Cemetery)
Franklin (Franklin Cemetery)	657	Grave of Alexander Hamilton Willard

City/Location	CHL #	Name
Sacramento	666	Camp Union, Sutterville
Elk Grove	680	Murphy's Ranch
Sacramento	697	Five Mile House - Overland Pony Express Route in California
Rancho Cordova	698	Fifteen Mile House - Overland Pony Express Route in California
Folsom	702	Folsom - Overland Pony Express Route in California
Elk Grove	719	Grave of Elitha Cumi Donner Wilder
Sacramento	745	The Coloma Road - Sutter's Fort
Folsom Lake State Recreation Area	746	The Coloma Road - Nimbus Dam
Sacramento	780	First Transcontinental Railroad
Sacramento	780-8	First Transcontinental Railroad - Western Base of the Sierra Nevada
Sacramento	812	Old Sacramento
Elk Grove	817	Site of First County Free Library Branch in California
Sacramento	823	Governor's Mansion
Sacramento	869	Site of First and Second State Capitols at Sacramento
Sacramento	872	California's Capitol Complex
Sacramento	900	Nisipowinan Village Site
Sacramento	934	Temporary Detention Camps for Japanese Americans - Sacramento Assembly Center
Sacramento	967	California Almond Growers Exchange Processing Facility
Sacramento	991	State Indian Museum
Sacramento	1013	Site of the First African American Episcopal Church Established on the Pacific Coast
Sutter County		
Yuba City (Highway 99)	346	Hock Farm (Site of)
Yuba City (Highway 20)	929	Site of the Propagation of the Thompson Seedless Grape
Yolo County		
Woodland	851	Woodland Opera House
Woodland	864	Gable Mansion
West Sacramento		Bryte VFW Memorial Hall
West Sacramento	1040	First Pacific Coast Salmon Cannery Site
Yuba County		
Highway 20, west of Smartsville	320	Timbuctoo
Smartsville	321	Smartsville
Wheatland	493	Johnson's Ranch
Wheatland	799-3	Overland Emigrant Trail
Marysville	889	Bok Kai Temple
Arboga Community, south of Marysville	934	Temporary Detention Camps for Japanese Americans - Marysville Assembly Center
Wheatland	1003	Site of the Wheatland Hop Riot of 1913

Note: The data in the table exclude the portions of El Dorado and Placer counties that are part of the Tahoe Regional Planning Area.

Sources: OHP 2025a, OHP 2025b.

Table 3.5-3 California Points of Historical Interest in the Plan Area

City/Vicinity	PHI#	Name	On NRHP
El Dorado County			
Carson Pass Summit	P42	Tragedy Spring (State Highway 88)	
Georgetown	P186	Hoboken House	
Placerville	P533	Methodist Episcopal Church/Episcopal Church of Our Savior	
Placerville	P637	Hangtown's Gold Bug Park - Hattie (Gold Bug), Priest, Silver Pine Mines, and 8-stamp Stamp Mill	
Placerville	P652	Pearson's Soda Works	X
Placerville	P653	The Stable Building	
Placerville	P734	The Smith Flat House	
Somerset	P747	Willow School	
Placerville	P809	Spanish Hill Mine Complex (Highway 50)	
Placer County			
Auburn	P354	Buckner's Bar	
Auburn	P355	Grizzly Bear House	
Auburn	P356	Liberty House	
Auburn	P357	Butcher Ranch	
Auburn	P358	Todd's Valley	
Auburn	P359	Clipper Gap	
Auburn	P360	U.S. Ranch	
Auburn	P361	Spring Garden School	
Penryn	P517	Griffith Residence	
Newcastle	P578	Newcastle Portuguese Hall	X
Dutch Flat	P618	Baxter (Baxter's Camp)	
Auburn	P619	Allen & Sandhorfer Blacksmith, Auburn Iron Works	
Auburn	P656	Burns Home, Howell Home	
Rocklin	P664	Finnish Temperance Hall, Finn Hall	
Auburn	P693	Auburn Grammar School, Auburn Civic Center Project	
Sheridan	P728	Sheridan Cash Store	
Auburn	P803	Auburn IOOF Hall	
Auburn	P821	Masonic Temple, Masonic Hall	
Newcastle	P836	Newcastle Fruit Sheds	
Auburn	P838	Auburn Public Library, Old Auburn Library	
Sacramento County			
Rancho Cordova	P823	American River Grange Hall #172	X
Rio Linda	P614	The Archway	
Folsom	P712	Chinese Diggings, Natoma Station Ground Sluice	
Sacramento	P666	Curran Farmhouse	
Sacramento	P754	Eastern Star Hall	
Elk Grove	P717	Elk Grove Grammar School/Elk Grove Unified School District	

City/Vicinity	PHI#	Name	On NRHP
Sacramento	P800	George Hack House	
Walnut Grove	P665	Jean Harvie School, Walnut Grove Community Center	
Sacramento	P126	Joseph Hampton Kerr Homesite	
Galt	P579	Liberty Schoolhouse	
Folsom	P798	Negro Bar	
Carmichael	N562	Nisenan Village Site	X
Sacramento	P532	Old Elk Grove Hotel Site	
Galt	P743	Rae House	
Sacramento	P149	River Mansion	
Citrus Heights	P737	Rusch Home	
Sacramento	P611	St. Elizabeth's Church	
Orangevale	P764	The Villa (Serve Our Seniors Incorporated)	
Sacramento	P744	Whitter Ranch (Originally Saylor Ranch)	
Folsom	P810	Yeong Wo Cemetery	
Citrus Heights	P*	Fourteen Mile House	
Sutter County			
Yuba City	P395	Bill Butler House	
Sutter	P315	Butte House watering Trough	
Yuba City	P390	Campbell's House	
Yuba City	P393	E.G. Van Arsdale House	
East Nicolaus	P333	East Nicolaus High School	
Yuba City	P396	Eugene Boyd House	
Sutter	P309	Freemont Monument	
Yuba City	P391	G.W. Carpenter House	
Yuba City	P311	H.C. McLaughlin Law Office	
Yuba City	P389	McGruder House	
East Nicolaus	P98	McKague Home	
Meridian	P314	Old Brick House of Sumner Paine	
Yuba City	P394	S.G. Stabler and Swinson House	
Yuba City	P312	Sanborn Law Office/Winship Hall	
Yuba City	P313	Sutter County Canning & Packing Company	
Yuba City	P387	Sutter County Courthouse	
Yuba City	P388	Sutter County Hall of Records	
Yuba City	P826	Sutter County Masonic Temple	
Yuba City	P392	Thomas D. Boyd House	
Yuba City	P385	William Harkey house	
Yuba City	P386	William O'Banion House	
Meridian	P310	Wooley's Grave	

City/Vicinity	PHI#	Name	On NRHP
Yolo County			
Capay	P567	Capay School	
West Sacramento	P765	Leonidas Taylor Monument	
Yolo	P213	Mary's Chapel and Cemetery	
Davis	P144	Russell Boulevard	
Woodland	P214	Saint Agnes Church	
Woodland	P767	William B. Gibson House, Yolo County Museum	
Woodland	P374	Woodland Congregational Church, First Church of Christian Scientist	
Woodland	P766	Yolo County Courthouse	
Yuba County			
Wheatland	P376	Camp Far West Cemetery	
Wheatland	P467	Chinese Cemetery and Funeral Pyre	
Challenge	P350	Falck House	
Wheatland	P377	Grace Episcopal Church	
Wheatland	P375	Johnson's Crossing	
Marysville	P828	Marysville Hotel	
Wheatland	P378	Muck Home	
Smartville	P817	Parks Bar Bridge 16-11 Site	
Marysville	P436	Ramirez Castle/The Mansion	
Dobbins	P783	Sacred Heart Church	
Smartville	P740	Smartville Church of the Immaculate Conception	
Wheatland	P379	Wheatland Masonic Temple	X
Challenge	P351	Woodleaf Hotel	X
Marysville	P841	Yuba Power House	

Note: The data in the table exclude the portions of El Dorado and Placer counties that are part of the Tahoe Regional Planning Area.

Sources: OHP 2025a, OHP 2025c.

In addition, the Historic Bridge Inventory maintained by Caltrans provides an overview of the bridges listed in or eligible for listing in the NRHP (Caltrans 2019a and 2019b). Bridges listed in, or formally determined eligible for listing in, the NRHP are automatically listed in the CRHR. In 2015, Caltrans updated the original inventory, which evaluated most of the state highway and local roadway bridges constructed prior to 1975 (Caltrans 2015). It was most recently updated in 2024 for bridges built between 1975 and 1984, and the NRHP status of some of the bridges has changed (Caltrans 2024).

Table 3.5-4 lists the historic bridges located in the plan area recorded in the Caltrans state and local bridge inventories (Caltrans 2019a, 2019b, 2023). The majority of historic bridges located in the plan area are found near major waterways, such as the American and Sacramento rivers. The historic bridges listed below should be considered in planning processes for road widening and interchange improvements. As noted, Caltrans updated the original inventory in 2015 and 2019 (Caltrans 2015, 2019a and 2019b), with the current 2024 list including evaluations for those bridges and tunnels constructed between 1975 and 1984 listed or formally determined eligible for listing in the NRHP are automatically listed in the CRHR (JRP 2023).

Table 3.5-4 Historic Bridges in the Plan Area

Bridge Name	Location	Bridge #	State of California Bridge Listed in NRHP	State of California Bridge Determined Eligible for NRHP	Local Agency Bridge Listed in NRHP	Local Agency Bridge Determined Eligible for NRHP
El Dorado County						
Echo Summit Sidehill Viaduct	03-ED-050-67.30	25 0044		X		
South Fork American River	0.1 mi E of SR 49	25C0004				X
Camp Creek	0.5 mi SE Mt Aukum Rd	25C0025				X
Rock Creek	5.5 mi NE of SR 193	25C0099				X
Weber Creek	1.1 mi NE Missouri Flat	25C0116				X
Placer County						
North Fork American River	1.5 mi W Shirt Tail Cyn Rd	19C0002				X
North Fork American River	East of I-80	19C0060				X
Sierra Boulevard Overhead	Roseville St & Lincoln St	19C0067				X
Sacramento County						
Sacramento River (Isleton)	03-SAC-160-5.86-IST	24 0051		X		
Steamboat Slough	03-SAC-160-19.76	24 0052		X		
Sacramento River (Paintersville)	03-SAC-160-20.87	24 0053		X		
Three Mile Slough	03-SAC-160-L6.98	24 0121		X		
Sacramento River (Freeport)	Concts Frprt Bl S Riv Rd	24C0001				X
American River (Jibboom Street)	0.1 mi N Richards Blvd	24C0022				X
American River (Greenback Lane)	0.2 mi E Folsom-Auburn Rd	24C0067				X
Gold Creek	0.1 mi W Amer River Cyn	24C0268				X
Yolo County						
Sacramento River (Tower Bridge)	03-YOL-275-13.07-WSAC	22 0021	X			
Cache Creek	500 ft E SH 16	22C0003				X
Davis Underpass	0.1 mi S of 1st St	22C0017			X	
Sacramento River ("I" Street)	At Sacramento Co. line	22C0153			X	
Yuba County						
Dry Creek	1.9 mi S Smartville Rd	16C0006				X
Oregon Creek	0.1 mi E of SR 49	16C0017			X	

Note: Bridges listed in or formally determined eligible for listing in the NRHP are automatically listed in the CRHR.

Source: Caltrans 2025.

Archaeological Resources

The variety of archaeological resources generally present in the six counties within the plan area include precontact sites, historic-era archaeological sites, sites with both precontact and historic-era components, and precontact or historic-era isolated finds. Archaeological resources may also include Native American sacred sites, tribal cultural resources, traditional cultural places, or traditional cultural properties, which are discussed separately in Section 3.17, "Tribal Cultural Resources."

Precontact site types in the plan area include, habitation sites, human burials, lithic scatters, bedrock milling features, toolstone quarries, and isolated artifacts. Historic-era archaeological sites in the plan area typically date to the Gold Rush era and early Euro-American settlement. Five categories of historical archaeological property types have been identified within the plan area: mining sites, building or structure foundations, refuse scatters and dumps, transportation-related features, and water conveyance systems. Concentrations of both precontact and historic archaeological sites in the plan area are commonly located along natural waterways, such as the American, Cosumnes, Feather, and Sacramento rivers as well as major tributaries and creeks.

The Archaeological Determinations of Eligibility (DOE), as well as the HPD, are master lists maintained by OHP that include all archaeological resources evaluated for their historic significance as properties that appear eligible for listing, have been determined eligible for listing, or are listed in the NRHP or CRHR. The DOE and HPD were reviewed in order to provide a broad overview of the types of significant archaeological resources located in the plan area. Because the DOE and HPD are updated as new resources are continuously located or reevaluated, this should not be considered final, but is the most comprehensive listing available as of January 2025, when the DOE and HPD were last updated by OHP. It is also important to note that the exact location of archaeological resources in the plan area is confidential and disclosure is restricted by federal and state laws, consistent with Section 304 of NHPA, Section 9 of the Archaeological Resources Protection Act, and State OHP Guidelines.

As noted under the section on Historic Built Environment Resources, archaeological sites that are evaluated and found, with SHPO concurrence, to be eligible for listing under one or more of the NRHP criteria but are never nominated, are afforded the same protections as listed properties. Historical resources of an archaeological nature listed in or determined eligible for listing in the CRHR may not be eligible for NRHP listing, but are afforded protection under CEQA. The DOE and HPD may also list archaeological resources that have been identified as historically significant by local government agencies. Such resources are also afforded protection under CEQA.

3.5.3 Environmental Analysis

METHODOLOGY

This program-level analysis assesses the potential impacts to cultural resources that could result from implementation of the 2025 Blueprint based on the Development Pattern and planned transportation improvements. For the purposes of the impact discussion, "historical resource" is used to describe built-environment historic-period resources. Archaeological resources (both precontact and historic-period), which may qualify as "historical resources" pursuant to CEQA, are analyzed separately from built-environment historical resources.

For cultural resources, the HPD and DOE master lists maintained by the OHP, and Caltrans Historic Bridge Inventory (as described in Environmental Setting section above) are the primary sources used to gather information on known significant archaeological resources and built environment properties in the plan area. Because the exact extent of ground disturbance associated with forecasted land use growth and transportation projects under the proposed 2025 Blueprint are unknown at this time, it is not possible to assess impacts on specific cultural resources. Accordingly, neither project-specific reviews nor field studies are feasible or necessary for this program EIR. Additionally, records searches and field studies are considered "expired" after 5 years (PRC Section 5024.1(g)(4)), and therefore it is beneficial to conduct them closer to the time of implementation. It is assumed that project-specific records searches and field studies will be conducted at the time of site-specific project implementation. The exact locations of significant cultural resources in or near specific proposed project areas related to the 2025 Blueprint are not known at this time. Consequently, impacts have been assessed below at the program-level and take into consideration potential direct or indirect impacts that may occur to known and unknown cultural resources in the plan area as a result of future ground-disturbing activities related to planned transportation improvements, including new roads, interchanges, widenings, and rail transit alignments; to projected land use pattern, including residential and commercial construction; and during future ongoing operations.

This evaluation of cultural resource impacts assumes the lead agency for specific projects that result from implementation of the 2025 Blueprint would comply, as appropriate, with federal, state, and local regulations, as follows:

- All projects undertaken by or jointly with Caltrans must abide by procedures and policies, outlined in Caltrans Standard Environmental Reference (SER), Volume 2 Cultural Resources. The SER also dictates the nature and extent of cultural resource protections consistent with federal and state environmental laws and regulations with which Caltrans must comply.
- For projects that constitute federal undertakings (defined in the Regulatory Setting section for cultural resources), consultation with the lead federal agency, SHPO, and appropriate consulting parties would be required in accordance with Section 106 of the NHPA.
- For projects that constitute federal undertakings, compliance with Section 4(f) of the Department of Transportation Act of 1966 would require a comprehensive evaluation of all environmental impacts resulting from projects that involve the use of or interference with the use of publicly- or privately-owned historic sites of federal, state, or local significance that are eligible for listing in or are listed in the NRHP.
- For projects that will affect state-owned historical resources as described in PRC Section 5024, if the lead agency is a state agency, consultation with the SHPO by the lead state agency is required as provided in PRC Section 5024.5. Sections 5024(f) and 5024.5 require SHPO consultation before altering, transferring, relocating, or demolishing state-owned historical resources that are listed in or are eligible for inclusion in the NRHP or are registered or eligible for registration as CHLs.
- If human remains are discovered during implementation of individual projects, all work within a minimum of 50 feet of the discovery site would halt immediately. Representatives of the project sponsor and/or lead agency would notify the County Coroner, as stipulated in Section 7050.5 of the California Health and Safety Code. The Coroner would determine whether the remains are Native American and, if so, would contact NAHC by telephone within 24 hours. NAHC would follow the stipulations in PRC Section 5097.98, including notification of those persons it believes to be most likely descended from the deceased Native American. If NAHC is unable to identify a descendant, the descendant is unable to make a recommendation, or the landowner rejects the recommendation, NAHC would mediate any dispute between the parties. Where such mediation fails to provide measures acceptable to the landowner, the landowner shall reinter the human remains and associated funerary items with appropriate dignity on the property, in a location not subject to further subsurface disturbance.
- Projects would comply with existing local regulations and policies that exceed any of the state or federal measures that protect built environment resources or archaeological resources.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the project would result in a significant impact on cultural resources if it would:

- cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5 of the State CEQA Guidelines;
- cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the State CEQA Guidelines; or
- disturb any human remains, including those interred outside of formal cemeteries.

ISSUES NOT DISCUSSED FURTHER

All potential cultural resources issues identified in the significance criteria are evaluated below.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.5-1: Cause a Substantial Adverse Change in the Significance of a Historical Resource

Regional Growth and Land Use Change

This impact concerns potential direct and indirect impacts to historical built environment resources. The bulk of potential impacts to historical built environment resources (i.e., historic buildings, structures, features, objects, districts, and landscapes) would likely occur during project construction although new operational changes may also impact the historic character of these resources. The potential for future projects stemming from the 2025 Blueprint to directly or indirectly impact historical built environment resources would, in general, vary by the development area type or location. Historical built environment resources are more prevalent in areas that were initially developed more than 50 years ago, including historic downtown or main street areas such as downtown Sacramento, Auburn, and Placerville. Concentrations of historic buildings or structures and the presence of historic districts are, thus, more likely in Center and Corridor Communities than in Developing Communities, which are more likely to be located in previously undeveloped areas. Although historical built environment resources may be more prevalent in older developed areas, they may be present in all Community Types. Examples of historical built environment resources that may be more frequently encountered in Developing Communities include historic mines, rural residences and barns, roads, bridges, canals, and rural landscapes.

As presented in the setting section of this section, numerous historically significant built environment resources within the plan area are listed in the NRHP or CRHR, are recognized as eligible for listing in the NRHP or CRHR, or are recognized as historically significant by local governments, and thus meet the definition of a historical resource. It is likely there are additional historical built environment resources (i.e., historic buildings, structures, features, objects, districts, and landscapes) located in the plan area whose historic significance has not previously been assessed or documented. Built environment resources of historic importance that have recently achieved 50 years in age, or would soon achieve 50 years of age, which are located in urban settings or in less developed areas may not have been inventoried and thus may not be currently listed in federal, state, or local records.

This analysis identifies three potential areas where impacts to built environment historical resources could arise: direct permanent impacts resulting from construction, indirect permanent impacts resulting from new visual elements, and indirect temporary or permanent impacts resulting from noise and vibration associated with construction and operation of projects. Each of these areas is discussed below.

Direct permanent impacts resulting from construction may include damage, physical demolition, destruction, relocation, or alteration of historical buildings or structures or the historic character of their physical surroundings with the introduction of incompatible infill development. The impact would be significant if a building or structure recognized as historically significant is removed or substantially modified in a manner inconsistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (Grimmer 2017). If alterations of a historical built environment resource would cause that resource to lose its ability to convey its historic significance (e.g., removing distinctive elements and/or features or altering the spatial relationship of contributing elements in a historic district or historic landscape), this direct impact may be addressed by design phase planning to ensure appropriate measures are devised in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties or Historic Landscapes (Birnbaum and Peters 1996; Grimmer 2017) that would minimize or reduce significant modifications to the historical resource's character-defining materials and features that could adversely impact the physical integrity of the built resource. In and around downtown city cores where historic districts may be located, construction may have a relatively higher potential to directly impact built environment historical resources.

Permanent indirect impacts stemming from construction related to the projected land use pattern or to ongoing operations by the introduction of new visual elements may indirectly diminish the character of the setting that contributes to the historic significance of a historical built environment resource. These indirect impacts may be significant if incompatible with the historic character and viewshed of historical built environment resources. Indirect visual impacts may be addressed through design phase planning to ensure appropriate measures are devised in

accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties that would minimize or reduce permanent visual impacts that could adversely impact historical built environment resources.

Temporary or permanent indirect impacts could also arise due to noise or vibration levels from new construction and/or ongoing operations, which is discussed in detail in Impact 3.12-3 Generate Excessive Groundborne Vibration or Groundborne Noise Levels in Section 3.12, "Noise and Vibration." Impacts could arise if the integrity of a built environment resource's significant historic features is diminished, the character of a building's physical features that contribute to its historic significance is changed, or the character of a building's historic use for noise-sensitive activities (e.g., theater, concert hall) is altered. Construction equipment, such as large bulldozers, pile drivers, or drill rigs, produce noise and vibration levels that may potentially have indirect adverse effects. If avoidance of a historical built environment resource is infeasible, these indirect impacts may also be addressed by design phase planning to ensure appropriate measures are devised in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties that would minimize or reduce significant noise or vibration levels that could adversely impact historical built resources.

Transportation Network Improvements and Programs

The localized impacts associated with implementation of the proposed transportation network improvements and programs are the same as those described in the "Regional Growth and Land Use Change" discussion above. Transportation network improvement and programs could potentially impact historical built environment resources due to direct impacts related to construction and operation that could result in modification or removal of a historical resource, and indirect impacts from new visual elements or from noise and vibration from construction projects and ongoing operations.

This analysis identifies three potential areas where impacts to built environment historical resources could arise: direct permanent impacts resulting from construction, indirect permanent impacts resulting from new visual elements, and indirect temporary or permanent impacts resulting from noise and vibration associated with construction and operation of projects. Each of these areas is discussed below.

Direct permanent impacts resulting from construction may include damage, physical demolition, destruction, relocation, or alteration of historical buildings or structures or the historic character of their physical surroundings through the widening of roads and bridges or addition of other transportation related improvements. The impact would be significant if a building or structure recognized as historically significant is removed or substantially modified in a manner inconsistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (Grimmer 2017). If alterations of a historical built environment resource would cause that resource to lose its ability to convey its historic significance (e.g., removing distinctive elements and/or features or altering the spatial relationship of contributing elements in a historic district or historic landscape), this direct impact may be addressed by design phase planning to ensure appropriate measures are devised in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties or Historic Landscapes (Birnbaum and Peters 1996; Grimmer 2017) that would minimize or reduce significant modifications to the historical resource's character-defining materials and features that could adversely impact the physical integrity of the built resource. In and around downtown city cores where historic districts may be located, construction may have a relatively higher potential to directly impact built environment historical resources.

Permanent indirect impacts stemming from construction related to the projected land use pattern or to ongoing operations by the introduction of new visual elements, such as elevated guideways, support columns, light rail platforms, or bridges, along an established route or by new land uses or new transportation improvements may indirectly diminish the character of the setting that contributes to the historic significance of a historical built environment resource. These indirect impacts may be significant if incompatible with the historic character and viewshed of historical built environment resources.

Temporary or permanent indirect impacts could also arise due to noise or vibration levels from new construction and/or ongoing operations, which is discussed in detail in Impact 3.12-3 Generate Excessive Groundborne Vibration or Groundborne Noise Levels in Section 3.12, "Noise and Vibration." Construction equipment, such as large bulldozers, pile drivers, or drill rigs, produce noise and vibration levels that may potentially have indirect adverse

effects. New or expanded rail operations have the potential to result in substantial vibration and noise that could expose historic buildings or structures to excessive ground-borne vibrations or ground-borne noise, whereas vehicular traffic on roadways is rarely the source of vibration and ground-borne noise because vehicles are supported on spring suspension and pneumatic tires. If avoidance of a historical built environment resource is infeasible, these indirect impacts may also be addressed by design phase planning to ensure appropriate measures are devised in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties that would minimize or reduce significant noise or vibration levels that could adversely impact historical built resources.

Summary

The potential impacts on historical built environment resources related to construction of the projects that could result in modification or removal of a historical resource, and indirect impacts from new visual elements or from noise and vibration from construction projects and ongoing operations resulting from implementation of the 2025 Blueprint would be **potentially significant**.

Mitigation Measures

SACOG does not have the authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measure or other comparable measure identified by the lead agency at a project level would reduce the impacts to historical built environment resources, and agencies with jurisdiction to adopt these measures should do so (PRC Section 21081).

Mitigation Measure 3.5-1: Conduct Project-Specific Historic Built Environment Resource Studies and Identify and Implement Project-Specific Mitigation

Measures that shall be implemented to address site-specific impacts, include, but are not limited to, the following:

- As part of the project/environmental review of individual projects, a records search at the appropriate Information Center of the CHRIS and a review of literature and historic maps shall be conducted to determine whether the project area has been previously surveyed and whether historic built environment resources were identified.
- In the event the records indicate that no previous survey has been conducted within the last 5 years, a qualified architectural historian (36 CFR Section 61) shall conduct a study of the project area for the presence of historic built environment resources. The study shall include conducting a field survey, necessary background, archival and historic research, consultation with local historical societies, museums or other interested parties as relevant, and preparation of a historic resource assessment report. The report shall document the results of the survey and the historic context, evaluate the federal, state, or local significance of built environment resources greater than 45 years in age that may potentially be directly or indirectly impacted by project activities, recommend appropriate protection or mitigative treatment, if any, and include recordation of identified built environment resources on appropriate California Department of Parks and Recreation (DPR) series 523 forms. The final report and DPR forms shall be filed by the architectural historian with the CHRIS. Recommended treatment for historical built environment resources identified in the report shall be implemented.
- If no significant historic built environment resources are identified in the Historic Resource Assessment Report or prior survey of the project study area that may be directly or indirectly impacted by project activities, then mitigation for built environment resources is complete, and there is no adverse change to documented historical built environment resources for the project.
- If significant historic built environment resources are identified in the Historic Resource Assessment Report or prior survey of the project study area, the project sponsor and/or implementing agency should consider avoidance as the primary mitigation measure. If avoidance is possible, mitigation to documented historical built environment resources is complete.
- If avoidance of a significant built environment resource is not feasible, then the maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, or reconstruction of the historical resource, as

recommended by a qualified architectural historian or historic architect (36 CFR Section 61) and conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitation, Restoring, and Reconstructing Historic Buildings or Historic Landscapes shall generally reduce impacts (Birnbaum and Peters 1996; Grimmer 2017). If adherence to the Secretary of the Interior's Standards cannot avoid materially altering in an adverse manner the physical characteristics or historic character of the surrounding environmental setting that contribute to a resource's historic significance, additional mitigation may be required.

- If avoidance or minimization of substantial adverse effects to a significant built environment resource is not feasible through project design or by adherence to the Secretary of the Interior's Standards, the project sponsor and/or implementing agency should ensure that Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), or Historic American Landscapes Survey (HALS) documentation is completed prior to demolishment or significant material alteration of the resource's physical characteristics or setting. The HABS, HAER, and HALS programs formally document historical resources through the use of large-format photography, measured drawings, written architectural descriptions, and historical narratives. The level of documentation required as mitigation and preparation of the HABS, HAER, or HALS shall be determined and prepared by a qualified architectural historian or historic architect (36 CFR Section 61). The documentation packages shall be archived in appropriate public and secure repositories. Such documentation would not reduce the impact to a less-than-significant level.

Significance after Mitigation

By implementation of this mitigation measure during project-level planning and design, direct impacts to historical built environment resources may be reduced to a less-than-significant level by avoidance or project redesign, by minimizing physical alterations, or by designing building use while retaining a property's historic character. The entire removal of a historically significant building or structure and/or the loss of character-defining features, however, would result in a significant and unavoidable direct impact. Indirect impacts to historical built environment resources may also be reduced by project-level planning designed to minimize or reduce permanent visual impacts and significant noise or vibration levels. However, because removal of a historically significant building or structure or the loss of character-defining features could still occur, the impact would be significant and unavoidable.

For projects proposing to streamline environmental review, lead agencies must conduct project-level analysis for each project to analyze whether, based on substantial evidence in the record, the proposed mitigation would reduce the impact to less than significant. However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, Impact 3.5-1 would be **significant and unavoidable** for purposes of this program-level review.

Impact 3.5-2: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources

Regional Growth and Land Use Change

This impact concerns potential direct and indirect impacts to archaeological resources.

As presented in the setting section of this chapter, numerous archaeological resources within the plan area are listed in the NRHP or CRHR, are recognized as eligible for listing in the NRHP or CRHR, are listed in local historical registers, or are recognized as historically significant by local governments, and thus meet the definition of a historical resource of an archaeological nature. Several of these pre-contact and historic archaeological sites may include human remains or are traditional cultural places. In addition, it is likely there are other precontact, ethnohistoric, and historic-period archaeological resources in the plan area that have not been documented or evaluated for listing in the NRHP, CRHR, or local registers, or that may be considered unique archaeological resources. Large portions of the plan area have not been subjected to archaeological survey and may contain significant archaeological resources, on the surface or at depth. Additionally, there are likely a considerable number of documented archaeological resources that have not yet been evaluated for eligibility for listing in the NRHP, CRHR, or local registers. A greater number of

surficial and buried archaeological resources are more likely to have been previously recorded in urbanized and commercial areas, particularly since the enactment of CEQA in 1970, and to be found and not yet documented within rural communities, which tend to be presently undeveloped.

This analysis identifies two potential areas where impacts to archaeological resources could arise: direct permanent impacts resulting from construction and indirect permanent impacts resulting from access-related damage associated with the regional growth pattern. Each of these areas is discussed below. Potential impacts to archaeological resources are more likely to occur during project construction rather than during ongoing operations and may vary by the location of planned improvements. Archaeological resources are more likely to have been destroyed within historic urbanized and commercial areas, although this does not preclude the presence in urban settings of buried archaeological resources that may be significant.

Direct permanent impacts to significant archaeological resources may result from ground disturbance associated with construction, such as grading and excavation. The potential for permanent direct impacts to unique archaeological resources may be comparatively less for improvements to existing facilities because these areas have been previously disturbed. Regardless of prior disturbance, however, excavation at depth has the potential to directly impact undocumented archaeological resources.

The buried nature of archaeological materials, deposits or features makes accurate prediction of their location during project planning difficult, resulting in their inadvertent discovery during project-related ground disturbance. The Sacramento Valley floodplains and the banks of rivers and large streams in the valley and adjacent foothills were occupied and used during the pre-contact, ethnohistoric, and historic periods with the result that archaeological resources, including human remains, are widespread and numerous within the plan area. River and stream drainages were often the prime locations for Native American village sites or processing camps, and for mining camps, ranches and farms, towns, and streamside transportation networks during the historic period. Precontact sites frequently took the form of mounds raised above the natural ground surface, but the upper portions of many of these sites are no longer visible—destroyed by modern agricultural practices, land reclamation, dam and levee construction, hydraulic or dredge mining, or Euro-American settlement. Intermittent flooding has also deposited layers of alluvium and buried intact archaeological sites below grade with no surface manifestations. In the first decade of the 21st century, for example, Native American burials and artifacts were found from 7 to 12 feet below the surface during construction for a section of light rail and for a new City Hall in downtown Sacramento. Features of historic-era archaeological sites, such as privies, trash pits, wells, foundations, and burials, have also been concealed by later land uses and discovered during subsequent development.

Direct permanent impacts would be significant if historical or unique archaeological resources cannot be avoided or preserved in place by project design or redesign and are destroyed or substantially altered. Disturbance of, damage to, or substantial alteration or removal of archaeological materials or features would compromise the physical integrity and information potential of an archaeological deposit. Disturbance may result in a significant impact if the resource is listed in or is eligible for listing in the NRHP, CRHR, or local registers and its contributing physical characteristics or the character of its physical setting is destroyed or substantially altered. This permanent direct impact may be addressed by advance project planning to ensure known historical or unique archaeological resources are avoided and preserved in place, and by project-redesign to avoid and preserve significant archaeological resources discovered inadvertently during project construction.

Permanent indirect impacts from construction and operational improvements may result from potential access-related damage to archaeological resources when public accessibility is increased because of the project. The likelihood of unauthorized artifact collecting and destruction (intentional or unintentional) of precontact, ethnohistoric, and historic archaeological sites or features increases with ease of access. Recreational use, overland vehicle travel, and vandalism of archaeological sites degrade the integrity of these resources and can affect their eligibility to the NRHP, CRHR, or local registers. Ensuring appropriate measures are devised during project planning that would minimize or reduce damage to historical or unique archaeological resources may reduce indirect access-related impacts.

Transportation Network Improvements and Programs

The localized impacts associated with implementation of the proposed transportation network improvements and programs are the same as those described in the Regional Growth and Land Use Change discussion above. Transportation network improvement and programs could potentially impact archaeological resources due to direct impacts related to construction and operation that could result in substantial alteration or removal of an archaeological resource, and indirect impacts from access-related damage from construction projects and ongoing operations. The development of new transportation facilities, construction of additional lanes, or the projected land use pattern stemming from the 2025 Blueprint may have a relatively higher potential to directly impact archaeological resources, primarily through excavation in previously undisturbed soil and the disturbance of buried resources that have not been previously identified. The potential for permanent direct impacts to unique archaeological resources may be comparatively less for improvements to existing facilities and modifications to existing rights-of-way since these areas have been previously disturbed.

Summary

Together, the potential impacts on archaeological resources that could result in substantial alteration or removal of an archaeological resource, and indirect regional impacts from access-related damage from construction projects and ongoing operations resulting from implementation of the 2025 Blueprint would be **potentially significant**.

Mitigation Measures

SACOG does not have the authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measure or other comparable measure identified by the lead agency and a qualified archaeologist at a project level would reduce the impacts to archaeological resources, and agencies with jurisdiction to adopt these measures should do so (PRC Section 21081).

Mitigation Measure 3.5-2: Conduct Project-Specific Archaeological Resource Studies and Identify and Implement Project-Specific Mitigation

Measures that shall be implemented to address site-specific impacts, include, but are not limited to, the following:

- A records search at the appropriate Information Center of the CHRIS shall be conducted by a qualified archaeologist (36 CFR Section 61) as part of the appropriate project/environmental review of individual projects to determine whether the project area has been previously surveyed and whether archaeological resources were identified.
- In the event the records indicate that no previous survey has been conducted or the survey did not meet current professional standards or regulatory guidelines, the qualified archaeologist (36 CFR Section 61) or the Information Center shall make a recommendation on whether a survey is warranted based on the sensitivity of the project area for archaeological resources and current professional standards or regulatory guidelines.
- If a survey is considered warranted, the archaeological study of the project area by a qualified archaeologist shall include conducting a field survey, necessary background research, a Sacred Lands search by the NAHC and outreach to local Native Americans identified by the NAHC, consultation with local historical societies, museums or other interested parties as relevant, and an archaeological survey report. The confidential report shall document the results of the survey and the cultural context, assess the federal, state, or local significance of precontact or historic-era archaeological resources that may potentially be directly or indirectly impacted by project activities, provide appropriate management recommendations, and include recordation of identified archaeological resources on appropriate California DPR series 523 forms. Management recommendations may include additional studies to evaluate identified sites, treatment for documented historical resources, or archaeological monitoring during ground-disturbing construction activities at locations determined by the archaeologist to be sensitive for subsurface cultural resource deposits, including local Native American monitors if sensitive for precontact resources. The final confidential report and DPR forms would be filed by the archaeologist with the CHRIS. Recommended treatment for resources identified in the report should be implemented.

- If no archeological resources are identified in the Archeological Survey Report that may be directly or indirectly impacted by project activities, mitigation is complete as there would be no adverse change to documented archeological resources.
- When a project would impact a known archaeological site, the project sponsor and/or implementing agency shall determine whether the site is a historical resource or an archaeological nature (State CEQA Guidelines Section 15064.5(c)(1)) or unique archaeological resource (PRC Section 21083.2(g)). If archaeological sites identified in the project area are considered potentially significant, the project sponsor and/or responsible implementing agency shall undertake additional studies overseen by a qualified archaeologist (36 CFR Section 61) to evaluate the resources eligibility for listing in the CRHR, NRHP, local register, or as a unique archaeological resource and to recommend further mitigative treatment. Evaluations shall be based on, but not limited to, surface remains, subsurface testing, or archival and ethnographic resources, on the framework of the historic context and important research questions of the project area, and on the integrity of the resource. If a site to be tested is precontact, local tribal representatives should be afforded the opportunity to monitor the ground-disturbing activities. Appropriate mitigation may include curation of artifacts removed during subsurface testing.
- If significant archaeological resources that meet the definition of historical resources of an archaeological nature or unique archaeological resources are identified in the project area, the preferred mitigation of impacts is preservation in place (State CEQA Guidelines Section 15126.4(b); PRC Section 21083.2). Preservation in place may be accomplished by, but is not limited to, avoidance by project design, incorporation within parks, open space or conservation easements, covering with a layer of sterile soil, or similar measures. If preservation in place is feasible, mitigation is complete. Additionally, where the implementing agency determines that an alternative mitigation method is superior to in-place preservation, the project sponsor and/or implementing agency may implement such alternative measures.
- When preservation in place or avoidance of historical resources of an archaeological nature or unique archaeological resources are infeasible, data recovery through excavation shall be required (State CEQA Guidelines Section 15126.4(b)). Data recovery would consist of approval of a Data Recovery Plan and archaeological excavation of an adequate sample of site contents so that research questions applicable to the site can be addressed. For precontact sites, local tribal representatives should be afforded the opportunity to monitor the ground-disturbing activities. If only part of a site would be impacted by a project, data recovery shall only be necessary for that portion of the site. Data recovery shall not be required if the implementing agency determines prior testing and studies have adequately recovered the scientifically consequential information from the resources. Confidential studies and reports resulting from the data recovery shall be deposited with the appropriate CHRIS 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. Mitigation may include curation for artifacts removed during data recovery excavation.
- If archaeological sites are discovered during construction, all work near the find shall be halted and the project sponsor and/or implementing agency shall follow the steps described under State CEQA Guidelines Section 15064.5(f), including an immediate evaluation of the find by a qualified archaeologist (36 CFR Section 61) and implementation of avoidance measures or appropriate mitigation if the find is determined to be a historical resource of an archaeological nature or unique archaeological resource. Consultation with or affording local tribal representatives the opportunity to monitor mitigative treatment may be appropriate. Should the find include human remains, the remains shall be treated in accordance with the provisions of Section 7050.5 of the Health and Safety Code. During evaluation or mitigative treatment, ground disturbance and construction work could continue on other parts of the project area.

Mitigation Measure 3.5-3: Reduce Visibility or Accessibility of Archaeological Resources

The project sponsor and/or implementing agency shall determine whether or not implementation of a project would indirectly impact historical or unique archaeological resources by increasing public visibility and ease of access. If so, the project sponsor and/or implementing agency shall take measures to reduce the visibility or accessibility of the archaeological resource to the public. Visibility of the resource can be reduced through the use of decorative walls or

vegetation screening. Accessibility can be reduced by installing fencing or vegetation barriers, particularly noxious vegetation such as poison oak or blackberry bushes. It is important to avoid creating an attractive nuisance when protecting significant archaeological sites. Conspicuous walls or signs indicating that an area is restricted may result in more attempts to access the excluded area.

Significance after Mitigation

By implementing these mitigation measures, direct impacts to archaeological resources may be reduced to a less-than-significant level by avoiding or preserving in place known archaeological resources through project design, and by avoiding or preserving inadvertent discoveries of significant archaeological resources through project redesign. The destruction or substantial alteration of the contributing physical characteristics or character of the physical setting of an archaeological resource, however, would result in a significant and unavoidable direct impact. Indirect impacts to historical resources of an archaeological nature or unique archaeological resources may be reduced to a less-than-significant level by project-level planning designed to reduce public visibility and accessibility. Therefore, if the implementing agency adopts these mitigation measures, Impact 3.5-2 may be reduced, but not to a less-than-significant level, because destruction or substantial alteration of the contributing physical characteristics or character of the physical setting of an archaeological resource could still occur.

For projects proposing to streamline environmental review, lead agencies must conduct project-level analysis for each project to analyze whether, based on substantial evidence in the record, the proposed mitigation would likely reduce the impact to less than significant. However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, Impact 3.5-2 would be **significant and unavoidable** for purposes of this program-level review.

Impact 3.5-3: Disturb any Human Remains, including those Interred Outside of Dedicated Cemeteries

Regional Growth and Land Use Change

Impacts related to disturbance of human remains are construction impacts that occur from ground disturbance. Impacts on human remains are by nature specific to their local context, and for this reason, impacts on these resources resulting from the 2025 Blueprint would occur at the local level. In general, potential impacts on human remains would be similar to those discussed for archaeological resource impacts discussed above. New land use development patterns and regional growth projects involving construction activities that would disturb native terrain, including excavation, grading, or soil removal, would have the greatest likelihood to encounter human remains.

California law recognizes the need to protect Native American human burials, Native American skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code Section 7050.5 and PRC Section 5097 et seq.

If human remains are discovered during any construction activities, potentially damaging ground-disturbing activities in the area of the remains shall be halted immediately, and the project applicant shall notify the appropriate county coroner and the NAHC immediately, according to PRC Section 5097.98 and Section 7050.5 of the California Health and Safety Code. If the remains are determined by NAHC to be Native American, the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. Following the coroner's findings, the NAHC-designated MLD and the landowner shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in PRC Section 5097.94.

Compliance with California Health and Safety Code Section 7050.5 and PRC Section 5097 would provide an opportunity to avoid or minimize the disturbance of human remains and to appropriately treat any remains that are discovered.

Transportation Network Improvements and Programs

The localized impacts associated with implementation of the proposed transportation network improvements and programs are the same as those described in the Regional Growth and Land Use Change discussion above. Transportation network improvement and programs could potentially impact human remains due to direct impacts related to ground-disturbing construction activities.

Summary

There are existing State regulations and oversight in place that would effectively reduce the potential to disturb human remains to an acceptable level. Therefore, this impact is **less than significant**.

Mitigation Measures

No mitigation is required.

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3.6 GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

This section describes current conditions related to geology, soils, and paleontological resources. It includes a description of geology, soils, and paleontological resources, analysis of environmental impacts, and recommendations for mitigation measures for any significant or potentially significant impacts. Naturally occurring asbestos is addressed in Section 3.3, "Air Quality."

SACOG did not receive comments related to geology, soils, and paleontological resources in response to the notice of preparation. Appendix A includes all comments received during the scoping period.

3.6.1 Regulatory Setting

FEDERAL

National Earthquake Hazards Reduction Act

In October 1977, the US Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States. To accomplish this, the act established the National Earthquake Hazards Reduction Program (NEHRP). The mission of NEHRP includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities.

Clean Water Act 402/National Pollutant Discharge Elimination System

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 excavation, additional information is provided below.

Section 402 mandates that certain types of construction activity comply with the requirements of the US Environmental Protection Agency's (EPA's) National Pollutant Discharge Elimination System (NPDES) program. EPA has delegated to the 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). Construction activity disturbing 1 acre or more must obtain coverage under the state's Construction General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (see "Construction General Permit," below). 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 due to construction activities, including earthwork.

All land use and transportation improvement projects within the plan area that would result in the disturbance of an area greater than 1 acre, would need to obtain coverage under the NPDES Construction General Permit and obtain an NPDES stormwater permit from the Central Valley RWQCB or the Lahontan RWQCB. Additionally, individual local jurisdictions implement requirements of SWRCB's NPDES Construction General Permit for Storm Water Discharges from small municipal separate storm sewer systems. The land use development and planned transportation projects would qualify as a "Regulated Project" as defined in Section E.12 of the Order and therefore would be required to comply with the standards provided in the Order.

STATE

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (Alquist-Priolo Act) (PRC Section 2621-2630) intends to reduce the risk to life and property from surface fault rupture during earthquakes by regulating construction in active fault corridors, and by prohibiting the location of most types of structures intended for human occupancy across the traces of active faults. The act defines criteria for identifying active faults, giving legal support to terms such as active and inactive, and establishes a process for reviewing building proposals in Earthquake Fault Zones. Under the Alquist-Priolo Act, faults are zoned and construction along or across these zones 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 within the last 11,000 years). A fault is considered well defined if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria, and judgment (Bryant and Hart 2007). Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards.

Seismic Hazards Mapping Act

The intention of the Seismic Hazards Mapping Act of 1990 (PRC Section 2690–2699.6) is 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 ground shaking, liquefaction, and seismically induced landslides. The act's 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.

In addition to the Seismic Hazards Mapping Act, the California Geologic Survey (CGS) provides the *Guidelines for Evaluating and Mitigating Seismic Hazards in California* for evaluating seismic hazards other than surface fault rupture, and for mitigation measures as required by PRC Section 2695(a) (CGS 2008). The most current guidelines are provided in Special Publication 117A of 2008.

California Building Code

The California Building Code (CBC) (California Code of Regulations, Title 24) is based on the International Building Code. The CBC has been modified from the International Building Code for California conditions, with more detailed and/or more stringent regulations. Specific minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. The CBC identifies seismic factors that must be considered in structural design. Chapter 18 of the CBC regulates the excavation of foundations and retaining walls, while Chapter 18A regulates construction on unstable soils, such as expansive soils and areas subject to liquefaction. Appendix J of the CBC regulates grading activities, including drainage and erosion control. The CBC contains a provision that provides for a preliminary soil report to be prepared to identify "…the presence of critically expansive soils or other soil problems which, if not corrected, would lead to structural defects." (CBC Chapter 18, Section 1803.1.1.1).

California Department of Transportation Seismic Design Criteria and Encroachment Permits

The California Department of Transportation (Caltrans) provides Seismic Design Criteria (SDC), which is an encyclopedia of new and currently practiced seismic design and analysis methodologies for the design of new bridges in California. The SDC adopts a performance-based approach, specifying minimum levels of structural system performance, component performance, analysis, and design practices for ordinary standard bridges. The SDC has been developed with input from the Caltrans Offices of Structure Design, Earthquake Engineering and Design Support, and Materials and Foundations. The *Engineering Service Manual: Bridge Memo 20-1 to Designers* outlines the bridge category and classification, seismic performance criteria, seismic design philosophy and approach, seismic

demands and capacities on structural components and seismic design practices that collectively make up Caltrans' seismic design methodology.

Additionally, Caltrans requires any construction project within a State highway rights-of-way to obtain an encroachment permit (Streets and Highway Code 660). Encroachment permits require site grading and drainage plans, as well as additional analysis for erosion and sediment control and stormwater pollution prevention.

Construction General Permit

Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under SWRCB's Construction General Permit (Order WQ 2022-0057-DWQ). Construction activity subject to this permit include clearing, grading, and disturbances to the ground, such as stockpiling or excavation.

Coverage under the Construction General Permit is obtained by submitting permit registration documents to SWRCB that include a risk-level assessment and a site-specific SWPPP that identifies an effective combination of erosion control, sediment control, and non-stormwater BMPs. The Construction General Permit requires that the SWPPP define a program of regular inspections of the BMPs and, in some cases, sampling of water quality parameters. The Central Valley RWQCB and Lahontan RWQCB administer the NPDES stormwater permit programs in the SACOG region.

Onsite Wastewater Treatment Systems

The SWRCB adopted the Onsite Wastewater Treatment Systems (OWTS) Policy: Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems in 2012. RWQCBs have principal responsibility for overseeing implementation of the policy, which requires local agencies to determine whether their regulations are consistent with the statewide minimum standards for water quality or whether the local agency will implement a Local Agency Management Program. The policy establishes a risk-based tiered approach for the regulation and management of OWTS installations and replacements, setting performance and protection level expectations and requiring actions where OWTS contribute to water quality degradation that adversely affect beneficial uses.

Tier 1 requirements with the SWRCB OWTS Policy is relevant to new or replacement OWTS that meet low risk siting and design requirements as specified in Tier 1, where there is not an approved Local Agency Management Program per Tier 2. Most of SACOG region is within areas that would be controlled by Tier 2 OWTS policy of a local management agency, often run by County code and planning ordinances.

A Local Agency Management Program under Tier 2 would be required for approval by SWRCB for subdivisions at densities greater than 0.75 dwelling units per acre in areas with less than 40 inches of annual average rainfall and 0.5 dwelling units per acre in areas with over 40 inches of annual average rainfall (SWRCB 2012).

Public Resources Code Provisions Related to Paleontological Resources

Paleontological resources on private property are considered the property of the landowner and receive no particular legal protection unless otherwise addressed in the conditions of approval of a land development permit, as mitigation in an applicable CEQA document, or through local policy and/or regulation (see below). Paleontological resources on public lands are protected by state statute (PRC Chapter 1.7, Archaeological, Paleontological, and Historical Sites, and Appendix G). Section 5097.5(a) of this statute states:

> A person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.

LOCAL

General Plans

The Safety Elements of the various city and county general plans of the plan area contain goals, objectives, and policies aimed at reducing the geologic hazards and seismic risk to people and property. Jurisdictions also address geologic hazards through land use regulation, including designation for lower densities and intensities in higher risk areas, and the use of land use overlays to denote areas with shared land use characteristics (e.g., mineral resource and natural resource overlays). Proponents of specific projects would be required to consult the applicable general plans and design the projects consistent with the applicable guidelines of the jurisdictions in which the projects are located.

Local Grading and Erosion Control Ordinances

Local jurisdictions have grading and erosion control ordinances that are intended to control erosion and sedimentation caused by construction activities. A grading permit is typically required for construction-related projects. As part of the permit, project applicants usually must submit a grading and erosion control plan, vicinity and site maps, and other supplemental information. Standard conditions in the grading permit include a description of BMPs similar to those contained in a SWPPP.

Geotechnical Investigations

Local jurisdictions in the plan area typically regulate construction activities through a process that may require the preparation of a site-specific geotechnical investigation, as required in CBC, Title 24, Part 2, Chapter 18. The purpose of a site-specific geotechnical investigation is to provide a geologic basis for the development of appropriate construction design. Geotechnical investigations typically assess bedrock and Quaternary geology, geologic structure, soils, and the previous history of excavation and fill placement. Proponents of specific projects in the plan area of the 2025 Blueprint that require design of earthworks and foundations for proposed structures would need to prepare geotechnical investigations on the physical properties of soil and rock at the site prior to project design.

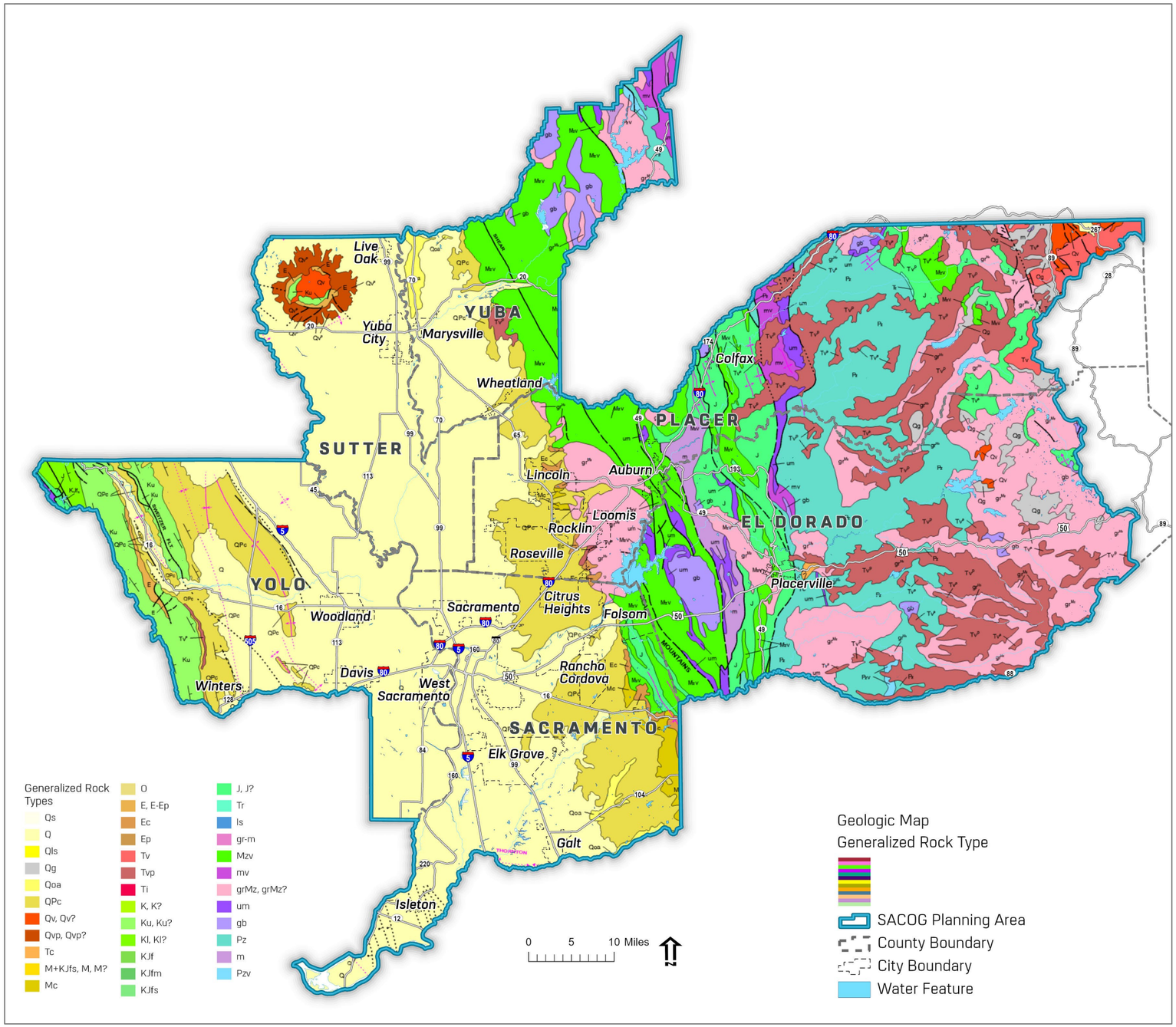
3.6.2 Environmental Setting

REGIONAL GEOLOGY

The plan area of the 2025 Blueprint is located in a broad area that extends across three of California's 11 geomorphic provinces, from the Coast Ranges on the west, across the Great Valley, to the Sierra Nevada on the east (Figure 3.6-1).

The western edge of the plan area is in the Coast Ranges geomorphic province. This province is characterized by northwest-trending mountain ranges and valleys formed over the past 10 million years by active uplift related to complex tectonics of the San Andreas fault and plate boundary system (Atwater and Stock 1998; Norris and Webb 1990). At the general latitude of the plan area, the eastern Coast Ranges consist of a central core of Mesozoic units, including the diverse units of the Franciscan complex, flanked on the west by extensive exposures of Miocene volcanic rocks and on the east by an upward younging sequence of marine and terrestrial sedimentary units that ranges in age from Cretaceous to Neogene (refer to geologic timescale in Table 3.6-1). The area's larger drainages preserve several generations of alluvial fan and stream deposits ranging in age from Pleistocene to Holocene (Wagner and Bortugno 1982).

The central portion of the plan area of the 2025 Blueprint is in the Sacramento Valley, which forms the northern portion of California's Great Valley geomorphic province (Norris and Webb 1990). The Great Valley is a nearly flat alluvial plain that lies between the Sierra Nevada on the east, the Coast Ranges on the west, the Tehachapi Mountains on the south, and the Klamath Mountains on the north. Subdivided into the Sacramento Valley to the north and the San Joaquin Valley to the south, the Great Valley has an average width of about 50 miles and is about 400 miles long. The Sacramento Valley is bounded by the Stockton Arch to the south (CGS 2002; Norris and Webb 1990).



Source: Prepared by SACOG in 2025 based on data from the California Geological Survey.

Figure 3.6-1 Geologic Map of the SACOG Region

The Great Valley is floored by a thick sequence of alternating marine and terrestrial sedimentary deposits that range in age from Jurassic through Holocene. The base of the sequence likely rests on Mesozoic crystalline rock associated with the Sierra Nevada in the east and central portions of the valley and on Franciscan metasediments and mélange associated with the Coast Ranges in the west. Mesozoic sedimentary rocks in the subsurface include 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 that record uplift and erosion of the Sierra Nevada and Coast Ranges to approximately their present shape (Norris and Webb 1990). Breaking the monotony of this long, flat valley is the Sutter Buttes, a volcano that intruded through the Great Valley sediments approximately 1.56 to 0.90 million years ago, creating the buttes and a ring of exposed Cretaceous and Tertiary sediments around the buttes (Hausback 1991).

The Sierra Nevada geomorphic province is a tilted fault block nearly 400 miles long, averaging 50 to 80 miles wide. The eastern face of this block is steep and marked with multiple, rugged scarps. In contrast, the western face is a gentle slope (about 2 degrees) that disappears under the sediments of the Great Valley (CGS 2002). The Sierra Nevada was formed by a series of intrusion, uplift, and erosional/depositional events. Plutonic rocks of the Jurassic to Cretaceous Sierran batholith occur throughout the province. The Western Metamorphic Belt is a complex collage of various lithologic units formed at a collisional plate boundary during the late Jurassic to early Cretaceous Nevadan Orogeny. The geologic units that make up the belt are marine metavolcanics, metasediments, and oceanic crustal rock of Ordovician to Jurassic age. The metamorphic bedrock contains gold-bearing veins in the northwest trending Mother Lode located along the western slope of the Sierra Nevada between the Feather and Tuolumne river drainages. Along the western edge of the northern Sierra Nevada, marine sediments of Cretaceous age are present, including fossiliferous sandstones and shales, overlay Sierran basement rocks. In a broken band along the lower foothills, the Ione Formation records Eocene marine sedimentation. This unit is known for the economic value of its high-quality clays and sands. Quaternary sedimentary rocks include alluvium, colluvium, landslide deposits, stream and river terrace deposits, lake deposits, and glacial deposits. The glacial deposits in the higher Sierra and the adjacent Basin and Range province are the oldest of the Quaternary deposits (Norris and Webb 1990).

Table 3.6-1 Divisions of Geologic Time

Era	Period	Time in Millions of Years Ago (approximately)	Epoch
Cenozoic	Quaternary	< 0.01	Holocene
		2.6	Pleistocene
	Tertiary	5.3	Pliocene
		23	Miocene
		34	Oligocene
		56	Eocene
		65	Paleocene
Mesozoic	Cretaceous	145	—
	Jurassic	200	—
	Triassic	251	—
Paleozoic	Permian	299	—
	Carboniferous	359	—
	Devonian	416	—
	Silurian	444	—
	Ordovician	488	—
	Cambrian	542	—
Precambrian	Precambrian	2,500	—

Source: USGS 2010.

Unique Geological Features

Key geological features in the plan area include the Sutter Buttes in Sutter County, which are a small circular complex of eroded volcanic lava domes that rise as buttes above the flat plains of the Sacramento Valley. In western Yolo County, Berryessa Snow Mountain National Monument includes several mountains that were once Jurassic seamounts. The gold deposits in the Mother Lode are a unique geologic resource in the Sierra Nevada.

Serpentine soils are present within the SACOG region. They are most commonly found in northeastern Yuba County, western El Dorado County and in pockets of central and northern Placer County (Figure 3.6-2). The presence of serpentine soils is discussed more in relation to asbestos in Section 3.2, "Air Quality."

TOPOGRAPHY AND DRAINAGE

The topographic features of the plan area of the 2025 Blueprint vary, depending upon physiography. In the west, the plan area is typical of an alluvial valley influenced by sediment introduction from the Sierra Nevada and its foothills. From southwest to northeast, topographic features consist of the Sacramento-San Joaquin Delta (Delta), flat alluvial valleys, river floodplains and channels, low alluvial plains and fans, and dissected uplands. The eastern portion of the plan area generally consists of rocky foothills that increase in elevation to the east to become the Sierra Nevada crest. Elevations presently range from below sea level on the western edge of the plan area to over 10,000 feet on the Sierra Nevada crest at the eastern edge.

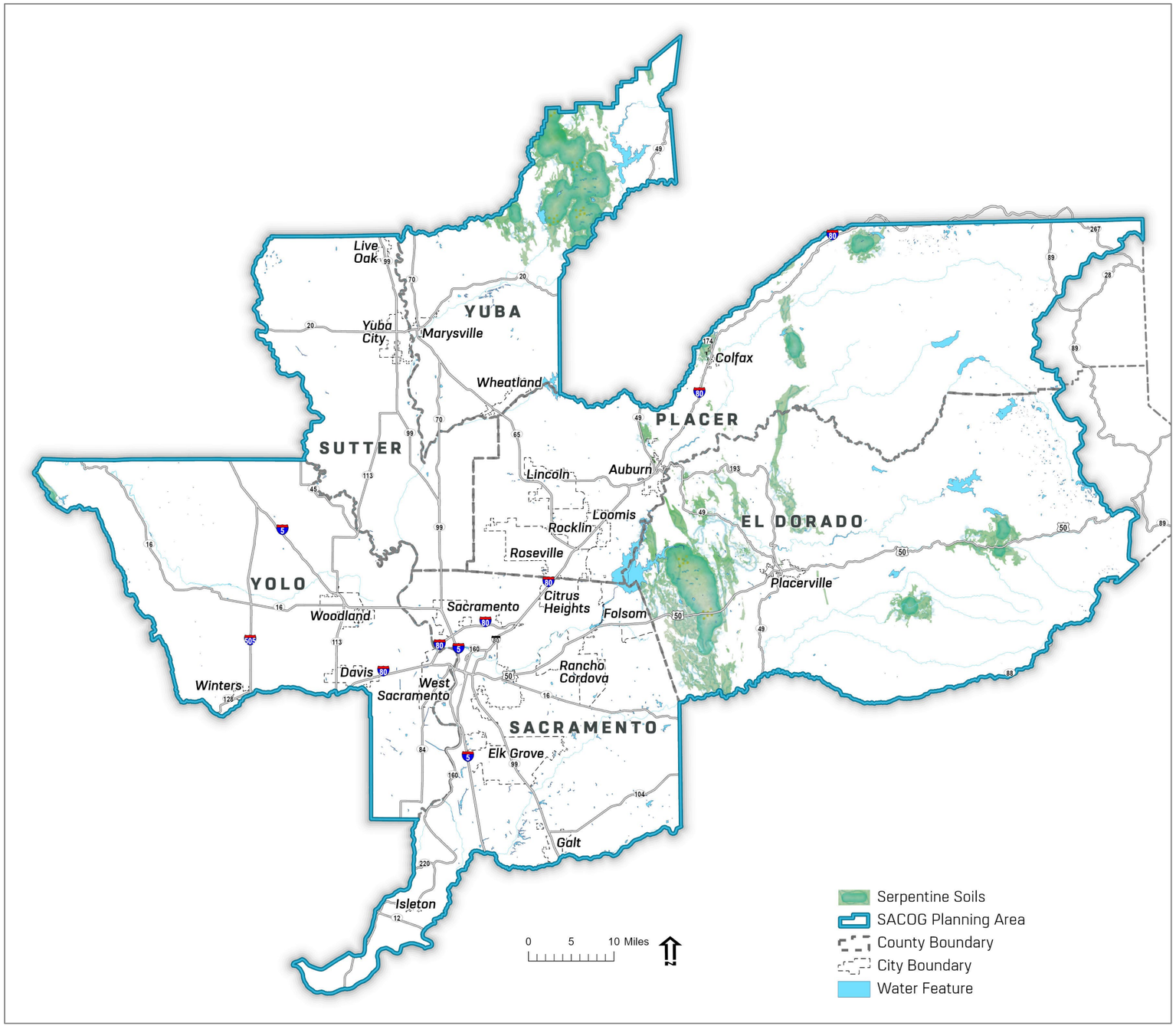
As described further in Section 3.9, "Hydrology and Water Quality," the SACOG region is entirely within the Sacramento River and San Joaquin River basins. The majority of the SACOG region is within the Sacramento River basin, however the southeastern portion of Sacramento County and the southwestern portion of El Dorado County are within the San Joaquin River Basin. Both of these rivers flow into the Sacramento Delta and to the Pacific Ocean.

SOILS

General Soil Order Descriptions

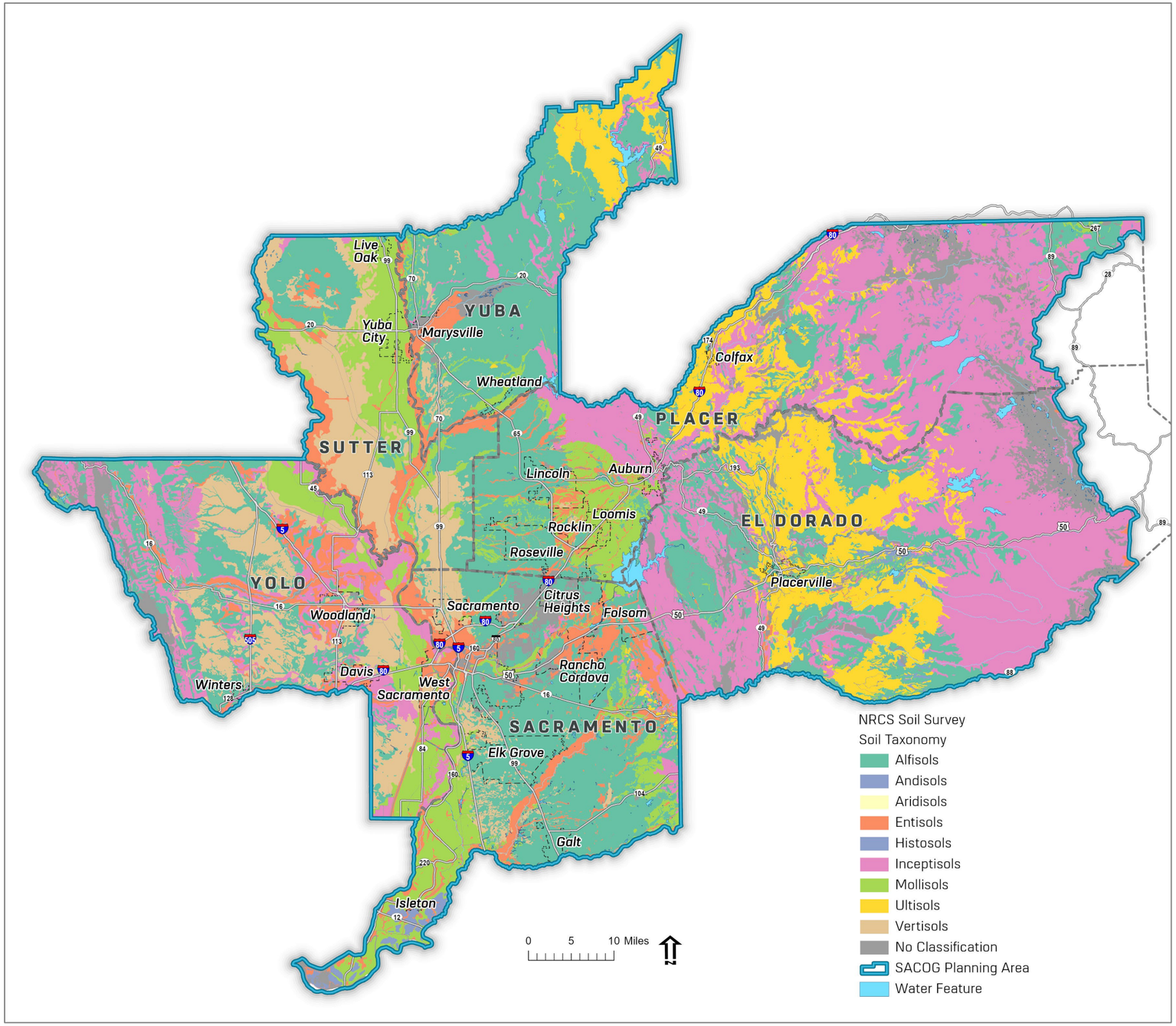
Soil order represents the broadest category of soils using USDA Soil Taxonomy. Soil taxonomy is a basic system of soil classification. There are 12 soil orders, differentiated by the presence or absence of diagnostic horizons or layers. Nine of the soil orders are present in the SACOG region: Alfisols, Entisols, Histosols, Inceptisols, Vertisols, Mollisols, and Ultisols. These are described below. Orders are divided into Suborders and the Suborders are farther divided into Great Groups. More productive soils are more likely to support a robust vegetation community, which reduces susceptibility to erosion. Due to organic composition, persistent moisture, and mineral diversity, productive soils are more capable than other orders of sustaining healthy plant growth and producing abundant crop yields. Figure 3.6-3 shows where each soil order occurs within the plan area.

- Alfisols: Alfisols are moderately weathered and have accumulations of translocated clay in the subsoil which can hold and supply moisture and nutrients to plants. They are formed primarily under hardwood forest or mixed vegetative cover and are productive for most crops (NRCS 2025). Alfisols are a productive order of soils.
- Andisols: Andisols form from weathering processes that generate minerals with little orderly crystalline structure. These minerals can result in an unusually high water and nutrient holding capacity (NRCS 2025). Andisols are a productive order of soils.
- Aridisols: Aridisols are soils that are too dry for the growth of mesophytic plants. They are common in the deserts of the world (NRCS 2025). Aridsols are a less productive order of soils.
- Entisols: Entisols are newly formed soils that have little or no evidence of soil formation other than presence of an identifiable topsoil horizon (NRCS 2025).
- Histosols: Histosols are made of organic materials. Most are saturated year round, but a few are freely drained. Histosols are commonly called bogs, moors, peats, or mucks (NRCS 2025).



Source: Prepared by SACOG in 2025 based on data from the California Geological Survey.

Figure 3.6-2 Serpentine Soils in the SACOG Region



Source: Prepared by SACOG in 2025 based on data from the National Resource Conservation Service.

Figure 3.6-3 Soil Taxonomy in the SACOG Region

- Inceptisols: Inceptisols exhibit a moderate degree of soil development and lack significant clay accumulation in the subsoil. They occur over a wide range of parent materials and climatic conditions and thus have a wide range of characteristics (NRCS 2025).
- Vertisols: Vertisols have a high content of clay that shrink when drying and swell when wet which forms deep wide cracks (NRCS 2025). Vertisols are a productive order of soils.
- Mollisols: Mollisols are soils with a high surface accumulation of organic matter (NRCS 2025). Mollisols are deep and fertile and are a productive order of soils.
- Ultisols: Ultisols are weathered soils of warm, wet climates that are highly leached and generally infertile. They contain a subsoil accumulation of clay. Most of these soils supported mixed coniferous and hardwood forest vegetation at the time of settlement. Some are now used as cropland or pasture (NRCS 2025).

Soil Types and Properties

As stated above, a wide variety of soils and soil types can be found throughout the six counties in the SACOG region. Land type and associated soils in the SACOG region are categorized into five major classifications described below that were established by the United States Natural Resources Conservation Service. Depending on localized conditions, these general classifications are grouped into more specific soil types by location, climate, and slope. Due to the large area the SACOG region encompasses and the hundreds of soils within the region, major land resource areas (MLRAs) are evaluated in this section. These major classifications groups create basic units for delineating statewide patterns of soils, climate, water resources, and land use. Elevation, topography, and rainfall (i.e. timing, type, and distribution) are the primary factors used to delineate these land type classifications (NRCS 2022). However, it is important to note that the population centers in the SACOG region have been developed, and in urbanized areas, native soils are commonly no longer present or have been reworked and combined with imported fill materials over a long history of earthwork activities associated with development.

The 2025 Blueprint falls within five MLRAs identified by NRCS. Most of the plan area is located within MLRA 17 - the Sacramento and San Joaquin Valleys, MLRA 18 - the Sierra Nevada Foothills, and MRLA 22A - the Sierra Nevada Mountains. Descriptions of soil texture and erosion, runoff, and expansion hazards for the five MLRAs are provided below for the surface horizon of the soils.

Central California Coast Range

The westernmost portion of the plan area in Yolo County is located within MLRA 15—the Central California Coastal Valleys. Soils within this area are gently sloping on hilly landscapes and primarily include Alfisols, Entisols, Mollisols, and Vertisols. Soil textures are generally clayey to loamy sand. The soils are generally very shallow to deep, and somewhat excessively drained to poorly drained. Major soil resource concerns are erosion, maintenance of the content of organic matter in the soils, water quality, and low infiltration rates resulting from hydrophobic soils.

California Delta

The southern portion of the plan area, at the edge of Yolo and Sacramento counties, is located within MLRA 16—the California Delta. Soils within this area are dominantly organic and associated with mineral soils high in organic matter. They include Entisols, Histosols, and Mollisols. Soil depth is very deep, and soils are poorly to very poorly drained and clayey in texture. The major soil resource concern is subsidence caused mainly by oxidation, wind erosion, and shrinkage of organic soils.

Sacramento and San Joaquin Valleys

The mid-western and northern portion of the plan area, including the majority of Yolo and Sacramento counties, as well as portions of Yuba and Placer counties, is located within MLRA 17—the Sacramento and San Joaquin valleys. Soils within this area primarily include alluvial Alfisols, Aridisols, Entisols, Mollisols, and Vertisols on low terraces, fans, floodplains, and basins. Soil textures are generally clayey to loamy sand. Soils in the northern portion of Yolo and Sacramento counties are organic and very deep. Erosion hazard is slight to none, runoff is very slow, and soil expansiveness is low to high, depending on geographic location and texture.

Sierra Nevada Foothills

The mid-eastern portion of the plan area, including portions of Yuba, Placer, and El Dorado counties, is located within MLRA 18—the Sierra Nevada Foothills. Soils within this area are nearly level to moderately sloping, and are primarily alluvial, although soils are residual at the highest elevations. Soil orders include Alfisols, Entisols, Inceptisols, and Mollisols. Soil textures are generally loamy to sandy and some are even gravel-like. Soil depth ranges from shallow to deep. The erosion hazard is moderate due to the presence of poorly aggregated volcanic and igneous rocks. Runoff is moderate to rapid, and soil expansiveness is low moderate.

Sierra Nevada Mountains

The easternmost portion of the plan area in Placer and El Dorado counties is located within MLRA 22A—the Sierra Nevada Mountains. Soils within this area are sloping on hilly landscapes and primarily include Alfisols, Entisols, Inceptisols, Mollisols, and Ultisols. Soil depth ranges from very shallow to deep, and these soils are well drained or somewhat excessively drained. Soil textures and are loamy or sandy. Erosion hazard is highest on the moderately coarse textured, granitic soils that have been disturbed by logging, fires, overgrazing, or cultivation. Drainage can be a problem in many of these soils, depending on geographic location and texture.

SUBSIDENCE

Land subsidence is the gradual settling or sinking of an area with very little horizontal motion. Subsidence can be induced by both natural and human phenomena. Natural phenomena include shifting of tectonic plates and dissolution of limestone resulting in sinkholes. Subsidence related to human activity includes pumping water, oil, and gas from underground reservoirs; collapse of underground mines; drainage of wetlands; and soil compaction and is the main mechanism for subsidence in the plan area.

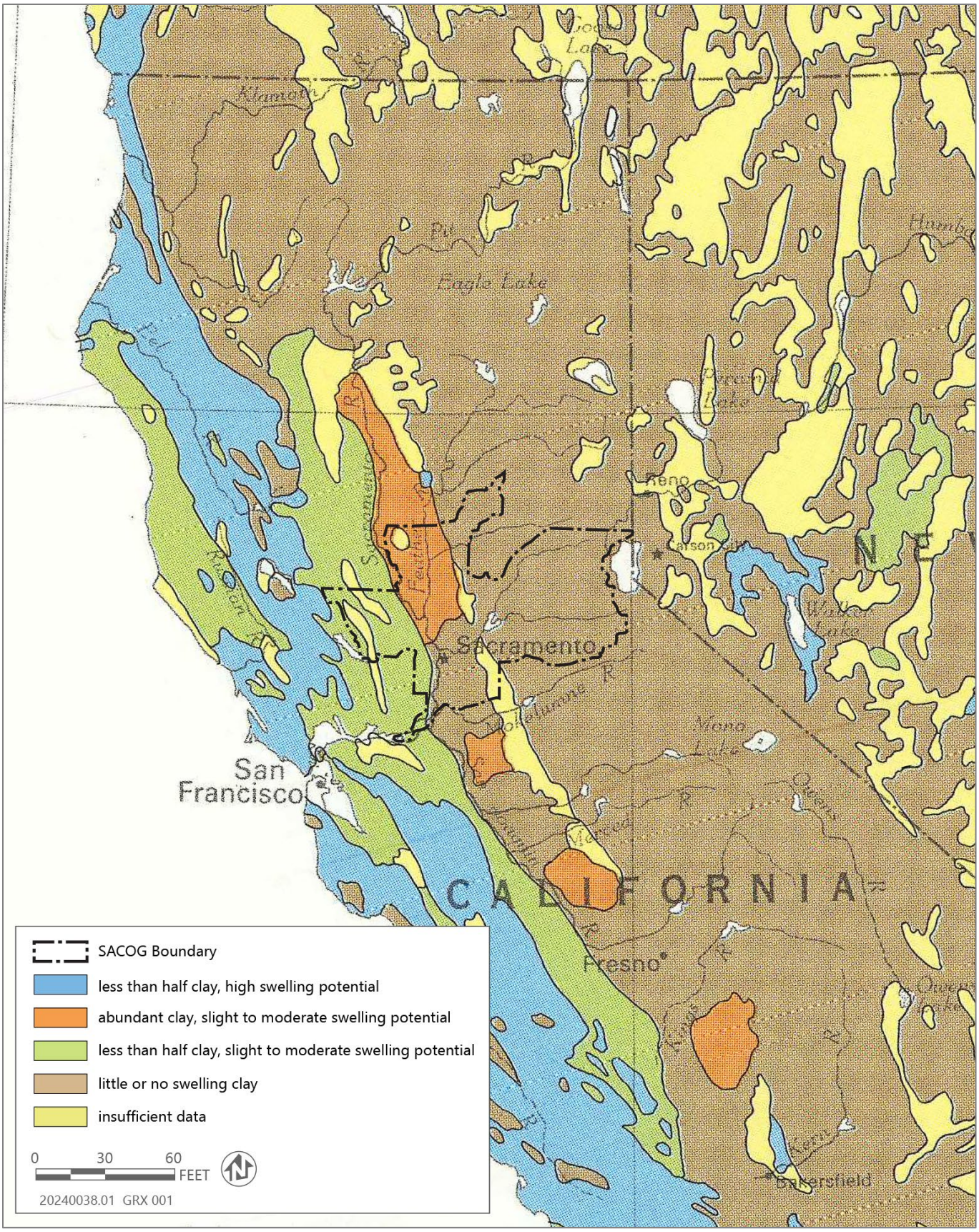
Historical and recent subsidence is present throughout northern and central Yolo County, where subsidence is highly likely to occur in the future. Sutter County has reported subsidence in the south, and south Sacramento and western Placer counties have recorded subsidence trends of up to 1 inch and up to 2.5 inches, respectively. Land subsidence is also highly likely to occur in the southwestern tip of Sacramento County and less likely to occur in the southeastern area. Subsidence is moderately likely to occur in the future in western Placer County, and southern Sutter County. The remainder of Sutter County and southern Yuba County have a lower risk of subsidence in the future. No past or future subsidence is estimated for El Dorado County (DWR 2014).

In the Delta, land subsidence has occurred due to oxidation and hydrocompaction. Subsidence initiated when the Delta was drained and reclaimed for agriculture. Continued exposure of the organic soils to oxygen during agricultural operations has accelerated the rate of decomposition of the organic matter (USGS 2007).

The primary hazards associated with subsidence are increased pressure on levees and damage to underground utilities. Other effects of subsidence include changes in the gradients of stormwater and sanitary sewer drainage systems in which the flow is gravity-driven.

EXPANSIVE SOILS

Expansive soils possess a "shrink-swell" characteristic. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Changes in soil moisture can result from rainfall, landscape irrigation, utility leakage, roof drainage, and/or perched groundwater. Perched groundwater is a local saturated zone above the water table that typically exists above an impervious layer (such as clay) of limited extent. Expansive soils are typically very fine grained and have a high to very high percentage of clay. Structural damage may occur incrementally over a long period of time, usually as a result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. El Dorado, Placer, Sacramento, and Yuba counties generally contain little to no swelling clay (Olive et al. 1989). Abundant clay with slight to moderate swelling potential covers most of Sutter County, as well as portions of western Placer and Yuba counties. Most of Yolo County and the southernmost Delta portion of Sacramento County have less than 50 percent expansive soils with slight to moderate swelling potential. In the far western tip, Yolo County also has less than 50 percent expansive soils that have high swelling potential. Figure 3.6-4 shows where expansive soils are located within the plan area.



Source: Prepared by SACOG in 2025 based on data from the USGS 1989.

Figure 3.6-4 Soil Expansion Areas in the SACOG Region

MASS WASTING AND LANDSLIDES

Mass wasting refers to the collective group of processes that characterize down slope movement of rock and unconsolidated sediment overlying bedrock. These processes include landslides, slumps, rockfalls, flows, and creeps. Many factors contribute to the potential for mass wasting, including geologic conditions as well as the drainage, slope, and vegetation of the site. The SACOG region has varying levels of slope instability, chiefly driven by the underlying geologic material and the general steepness of the terrain. Other factors that contribute to slope instability are heavy rains, grading, and earthquakes.

The California Department of Conservation (DOC) has mapped the relative likelihood of deep-seated landslides based on regional estimates of rock strength and steepness of slopes (DOC 2025a). Generally, weak rocks and steep slopes are more likely to generate landslides. There is high landslide susceptibility at the eastern portion of the plan area in Placer and El Dorado counties and the western edge of the plan area in Yolo County. There is moderate susceptibility mapped in the foothills of Yuba, Placer, El Dorado, and Sacramento counties. The potential for landslides in the Sacramento Valley is generally low. While several sites in northwest and southwest Yolo County (Lower Lake, Wilson Valley, and Glascock Mountain) and mid-east El Dorado County (Riverton, Kyburz, and Pyramid Peak) have been identified as landslide hazards (DOC 2025a). See Figure 3.6-5 for landslide susceptibility in the plan area.

SEISMICITY

Most earthquakes originate along fault lines. A fault is a fracture in the Earth's crust along which rocks on one side are displaced relative to those on the other side due to shear and compressive crustal stresses. Most faults are the result of repeated displacement that may have taken place suddenly or by slow creep (Bryant and Hart 2007).

The Alquist-Priolo Act (see Section 3.6.1, "Regulatory Setting," above) was created to prohibit the location of structures designed for human occupancy across, or within 50 feet of, an active fault, thereby reducing the loss of life and property from an earthquake. As defined under the Alquist-Priolo Act, an active fault is one that has had surface displacement within Holocene time (about the last 11,000 years). An early Quaternary fault is one that has had surface displacement during Quaternary time (the last 1.6 million years). A Pre-Quaternary fault is one that has had surface displacement before the Quaternary period (Bryant and Hart 2007).

Seismic hazards include earthquake fault ground rupture and ground shaking (primary hazards), and liquefaction and earthquake-induced slope failure (secondary hazards). While there are few faults in the region, fault ruptures resulting in earthquakes have occurred in the vicinity of the plan area.

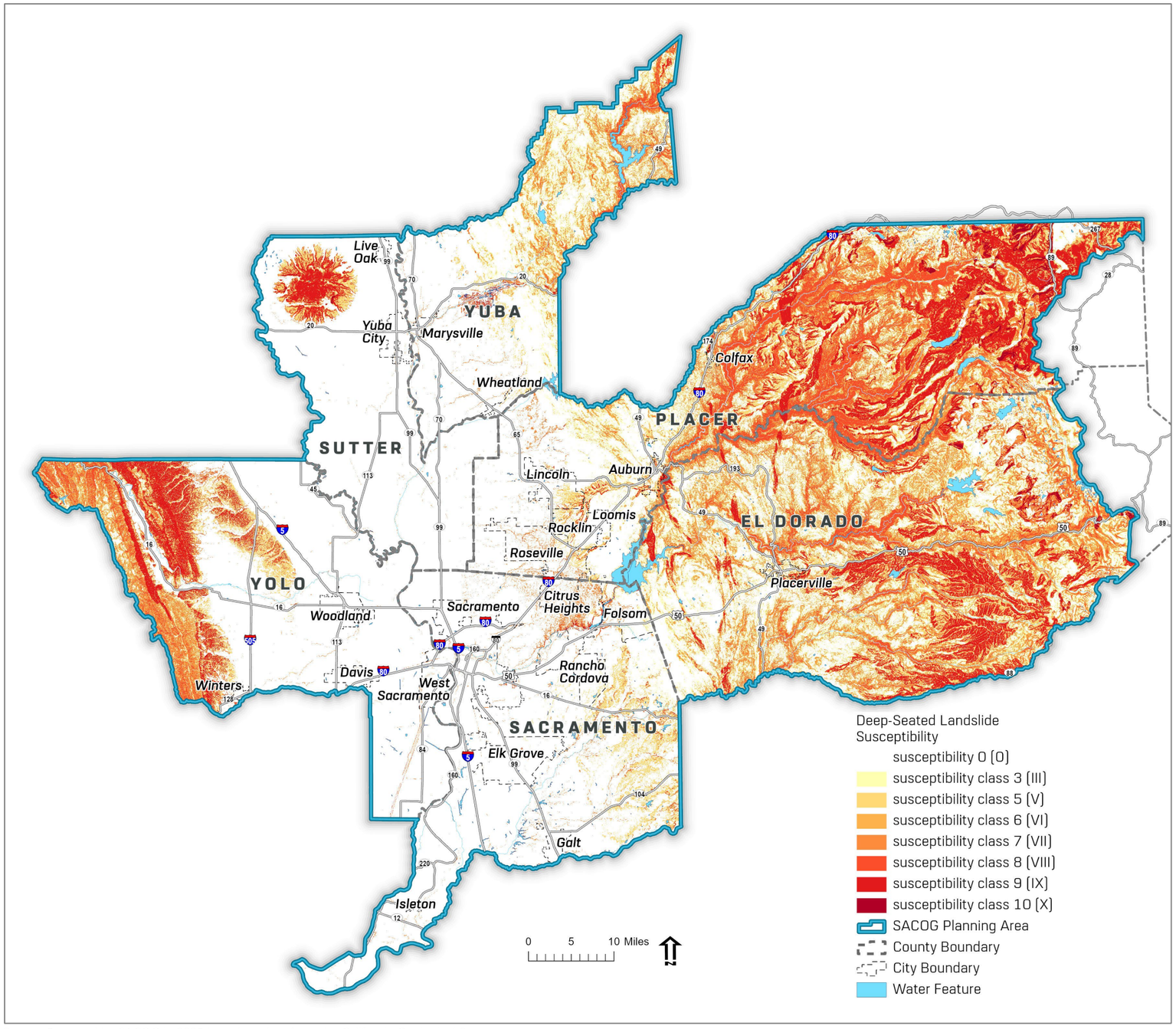
Surface Fault Rupture

Figure 3.6-6 depicts fault lines within the SACOG region. The SACOG region has one confirmed Alquist-Priolo active fault zone (Bryant and Hart 2007). In Yolo County, the Hunting Creek Fault is an active fault located in the extreme northwestern corner of the County. Most of the fault is located in Lake and Napa counties. The Dunnigan Hills Fault is the only other potentially active fault within the plan area, which is also located in an unincorporated area of Yolo County to the west of Interstate 5, between Dunnigan and the community of Yolo (DOC 2025b). El Dorado County does not have any active faults; however, one fault that is part of the Rescue Lineament-Bear Mountain fault zone is potentially active (DOC 2025b).

Although recent evidence suggests that buried thrust and inferred faults may be located within the SACOG region, these faults do not have surface ruptures and are not officially recognized by the State of California.

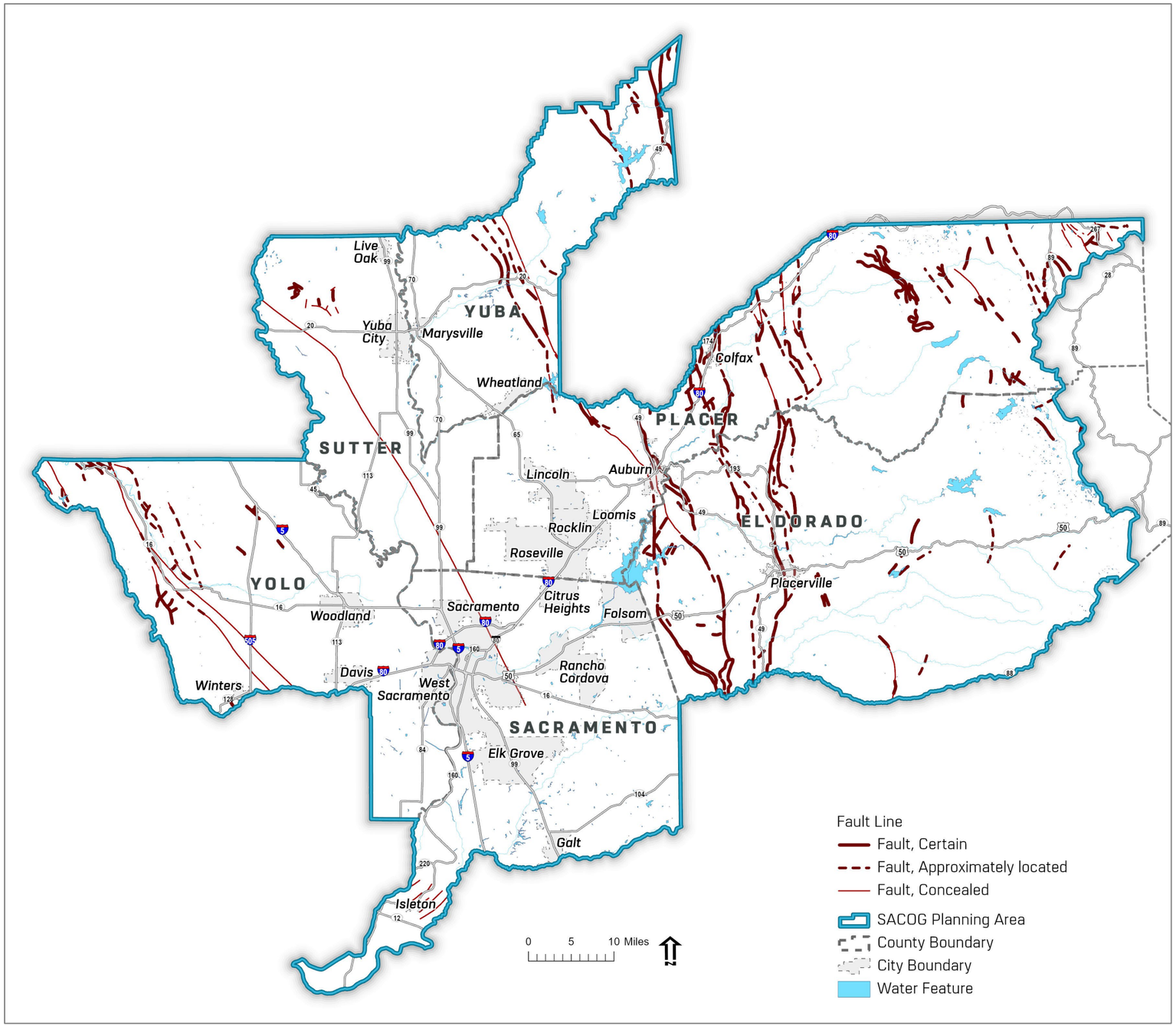
Ground Shaking

The intensity of seismic shaking, or strong ground motion, during an earthquake is dependent on the distance and direction from the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions of the surrounding area. Ground shaking could potentially result in the damage or collapse of buildings and other structures.



Source: Prepared by SACOG in 2025 based on data from the California Geological Survey.

Figure 3.6-5 Landslide Susceptibility in the SACOG Region



Source: Prepared by SACOG in 2025 based on data from the California Geological Survey.

Figure 3.6-6 Fault Lines in the SACOG Region

Geologic and soil units comprised of unconsolidated, clay-free sands and silts can reach unstable conditions during ground shaking, which can result in extensive damage to structures built on them (see the "Liquefaction and Related Hazards" section below). Ground shaking is described by two methods; ground acceleration as a fraction of the acceleration of gravity or the Modified Mercalli scale, which is a more descriptive method involving 12 levels of intensity denoted by Roman numerals. Modified Mercalli intensities range from I (shaking that is not felt) to XII (total damage). An expected characteristic earthquake on the entire San Andreas Fault System (west of the SACOG region) is a Moment Magnitude scale (Mw) of 7.9 and is probably the largest earthquake that would be felt in the region. Given the distance between the San Andreas Fault and sections of the SACOG region, the felt intensity would be expected to be between MMI IV and V (light to moderate shaking). However, a felt intensity between MMI VII and VIII would be caused by a characteristic earthquake on the Dunnigan Hills fault of Mw 6.6 because it is within the northwest corner of the SACOG region.

Overall, the plan area is located in an area of low earthquake hazard and experiences low levels of ground shaking on an infrequent basis (DOC 2025b). Figure 3.6-7 illustrates the ground-shaking hazards in the plan area based on data from the California Geological Survey.

Liquefaction and Related Hazards

Liquefaction is a phenomenon in which loose, saturated, granular soil deposits lose a significant portion of their shear strength because of excess pore water pressure buildup. An earthquake typically causes the increase in pore water pressure and subsequent liquefaction. These soils behave like a liquid during seismic shaking and re-solidify when shaking stops. The potential for liquefaction is highest in areas with high groundwater and loose, fine, sandy soils at depths of less than 50 feet. Based on the sedimentological characteristics of the soils and the depth to groundwater, the liquefaction hazard is expected to be moderate for the portion of the plan area within the Great Valley geomorphic province and low for the portions of the plan area within the Sierra Nevada and Coast Range geomorphic provinces. Mapping conducted pursuant to the Alquist-Priolo Act, indicates that the plan area is not located within a potential liquefaction hazard zone that would require further investigation (DOC 2025c).

Liquefaction may also lead to lateral spreading. Lateral spreading is the horizontal movement or spreading of soil toward an "open face," such as a streambank, the open side of fill embankments, or the sides of levees. It often occurs in response to liquefaction of soils in an adjacent area. The potential for failure from lateral spreading is highest in areas where there is a high groundwater table, where there are relatively soft and recent alluvial deposits, and where creek banks are relatively high. Lateral spreading is common in the Great Valley geomorphic province (especially in the Delta) and poses a moderate to significant hazard (ABAG 2001).

Another common hazard in the Great Valley geomorphic province (specifically the Delta) is differential settlement (also called ground settlement and, in extreme cases, ground collapse) as soil compacts and consolidates after ground shaking ceases. Differential settlement occurs when the layers that liquefy are not of uniform thickness, a common problem when the liquefaction occurs in artificial fills (Metwally n.d.). Ground shaking and liquefaction could also result in dam failure, which is addressed in Section 3.9, "Hydrology and Water Quality."

PALEONTOLOGICAL RESOURCES

Paleontological resources include mineralized, partially mineralized, or unmineralized bones and teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains that are more than 5,000 years old and occur mainly in Pleistocene or older sedimentary rock units. Key information used in the preparation of this section is derived from published geologic literature and maps, and from guidelines published by the Society of Vertebrate Paleontology (SVP).

The SVP guidelines establish the criteria for screening the paleontological potential of rock units as high potential, undetermined, low potential, or no potential (SVP 2010). Paleontological potential refers to the likelihood that a rock unit will yield a unique or significant paleontological resource. All sedimentary rocks, some volcanic rocks, and some low-grade metamorphic rocks have potential to yield significant paleontological resources. Depending on location,

the paleontological potential of subsurface materials generally increases with depth beneath the surface, as well as with proximity to known fossiliferous deposits.

The fossil yielding potential of a particular area is highly dependent on the geologic age and origin of the underlying rocks, which vary in distribution and surface exposure throughout the plan area. In the planning stage for a specific project, the fossil yielding potential is best determined by initially identifying the aerial and stratigraphic extents of the local geology, and performing a site-specific search of fossil locality records and peer-reviewed literature, followed by a field survey if appropriate.

For program-level purposes, the description of the paleontological sensitivity of geologic units in the plan area of the 2025 Blueprint is necessarily broad and focuses on widespread or well-known rock units. This discussion also focuses on the vertebrate fossil record because the rarity and uniqueness of these fossils contribute to a high paleontological potential of the associated rock units. Paleontological resources reviewed in the following subsections are described by county and are based on review on January 31, 2025 of the records maintained in the University of California Museum of Paleontology (UCMP) database. "County" is used to refer to the geographic area of the county and includes all land, both county and city, in that area.

El Dorado County

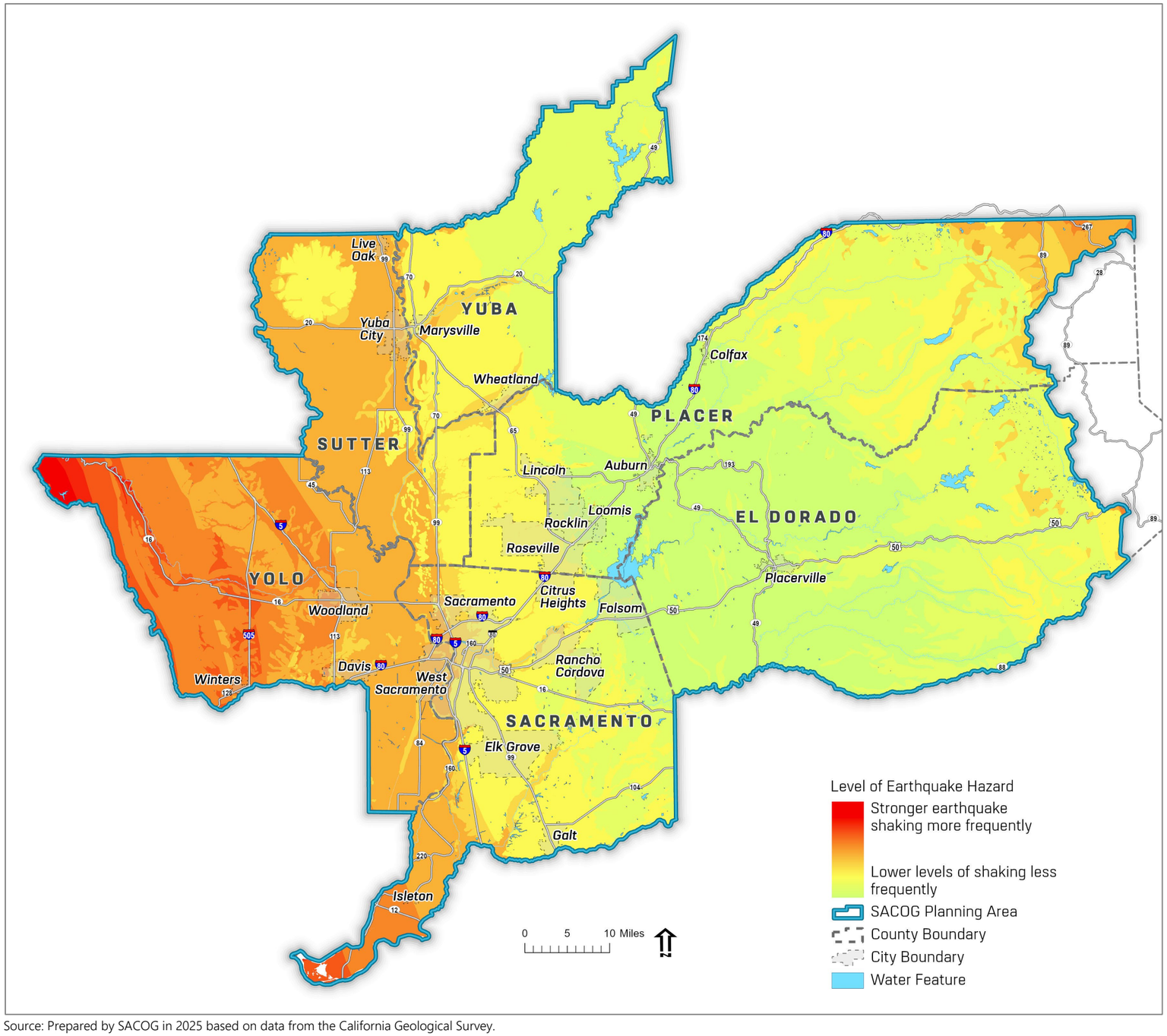
El Dorado County is in the Sierra Nevada geomorphic province. The Mehrten Formation, which is known to contain vertebrate fossils and is known to have a high paleontological sensitivity, is widespread in the central portion of the county (Wagner et al. 1981). Otherwise, the sensitivity for paleontological resources in El Dorado County is similar to much of eastern Yuba and Placer counties where the sensitivity of the many geologic units in the foothills of the Sierra Nevada province require further study. Plutonic and metavolcanic units are unlikely to contain paleontological resources, but sedimentary and volcanic deposits could be sensitive for these resources.

Of special note is the cave paleontology of El Dorado County. The county has 3,803 records of vertebrate fossils, and these records are almost exclusively from Hawver Cave, Cool Cave, and Crystal Caverns (UCMP 2025a). These caves formed in limestone deposits in the Calaveras Formation. As Pleistocene-age animal remains accumulated in the caves, cave fill covered the remains. Cave fossils represent the animals that lived in, fell into, or were dragged by carnivores into the cave. This type of preservation is extremely rare and rich in scientific information. Fossils from these caves include ground sloths, raven, cougar, mammoth, dire wolf, deer, rodents, rabbit, and saber-toothed cat. Limestone in the county is therefore highly sensitive for paleontological resources.

Placer County

Placer County straddles the Great Valley and Sierra Nevada geomorphic provinces. The paleontological sensitivity of the geologic units is similar to Yuba County with much of the western edge of the county underlain by highly sensitive Pleistocene units, including the Riverbank Formation (Gutierrez 2011; Wagner et al. 1981). Except for the limestone deposits of the Calaveras Formation, the sensitivity of the numerous geologic units in the foothills of the Sierra Nevada geomorphic province requires further study. Of the five UCMP vertebrate fossil records in Placer County, one is from the Pleistocene, a mastodon; three are from the Tertiary, a bony fish, a mammal, and a reptile; and one is from the Cretaceous, a cartilaginous fish (UCMP 2025b). Unlike the limestone cave paleontology of El Dorado County, no fossils have been reported from the Calaveras Formation deposits in Placer County.

In addition, the well-known Mehrten Formation of Tertiary age is exposed in Placer County. Although there are no records of fossils in this unit in Placer County, UCMP has 339 records of vertebrate fossils from the Mehrten Formation in other California counties in the Great Valley geomorphic province. Fossils found in this unit include horse, mastodon, bony fish, saber-toothed cat, rodent, reptile, and camel (UCMP 2025c). As stated above, the Mehrten Formation contains fossils that aid in interpreting late Miocene uplift of the Sierra Nevada mountain ranges, natural life during this time, climate, and environment of deposition. This unit is therefore known to be highly sensitive for paleontological resources.



Source: Prepared by SACOG in 2025 based on data from the California Geological Survey.

Figure 3.6-7 Ground-Shaking Hazards in the Plan Area

Sacramento County

Sacramento County is entirely within the Great Valley geomorphic province, and Quaternary deposits directly underlie most of the county. The youngest of these deposits, such as the basin deposits and levee and channel deposits, are of Holocene age (less than 10,000 years old) and are therefore unlikely to contain paleontological resources. The Holocene deposits, however, may occur as a thin veneer overlying older, more sensitive deposits (Gutierrez 2011; Wagner et al. 1981).

Older Quaternary deposits of Pleistocene age, such as the Riverbank and Modesto Formations, are widespread in Sacramento County and are known to be highly sensitive for paleontological resources. The UCMP database contains 126 records of vertebrate fossils in the county, including records for mammoth, camel, wood rat, and snake. Nearly all of these are from the Riverbank Formation (UCMP 2025d), which is well represented by important fossils recovered from excavations in North Natomas in 1989. Fossils recovered from the construction of the former Sleep Train Arena included remains of ground sloth, dire wolf, horse, rabbit, birds, wood rat, bison, camel, coyote, antelope, deer, and mammoth, as well as clams, fish, turtles, frogs, snakes, and land plant wood, leaves, and seeds at a minimum depth of 12 feet (Hilton et. al. 2000). In 2004 in the City of Elk Grove, fossils were discovered in a similar Riverbank Formation at a minimum depth of 3 feet. Although there are presently no fossil records from the Modesto Formation in Sacramento County, diverse vertebrate faunas have been collected from similar Pleistocene alluvial units in other parts of northern California.

Numerous Tertiary and Jurassic deposits occur along the eastern margin of Sacramento County. These deposits could be sensitive for paleontological resources because they could contain vertebrate fossils, although further information is needed to confirm sensitivity.

Sutter County

The paleontological sensitivity of most of Sutter County, which is directly underlain by Quaternary deposits, is similar to Sacramento and Yolo counties (Saucedo and Wagner 1992). The Holocene basin, levee and channel deposits are not known to be sensitive for paleontological resources, but the older Pleistocene deposits (such as the Riverbank and Modesto Formations) are highly sensitive. Of the five vertebrate fossil records in Sutter County, three are in Pleistocene deposits and are of bison, horse, and an unidentified mammal (UCMP 2025e).

Although wholly in the Great Valley geomorphic province, Sutter County is unique because of the intrusion of the Sutter Buttes. Tertiary and Cretaceous geologic units are exposed in this portion of the valley as a result of volcanism associated with the Sutter Buttes (Saucedo and Wagner 1992). UCMP has two records for Tertiary fossils in Sutter County, one of a cartilaginous fish in the Capay Formation and another of a horse in the Sutter Formation (UCMP 2025e). These two geologic units are, therefore, known to be sensitive for paleontological resources.

Yolo County

Yolo County is in both the Great Valley and Coast Ranges geomorphic provinces. The eastern portion of Yolo County is in the Great Valley province and, similar to Sacramento County, is directly underlain by Quaternary deposits (Gutierrez 2011; Wagner and Bortugno 1982; Wagner et al. 1981). As in Sacramento County, the Holocene deposits are not known as sensitive for paleontological resources, but the older Pleistocene deposits, such as the Riverbank and Modesto Formations, are highly sensitive. In a section of Riverbank Formation in 1975 along the banks of Putah Creek in the City of Davis, mammoths were discovered to be already exposed at surface level and were similar to buried fossils in nearby sites in Sacramento County.

Of the 92 UCMP records for vertebrate fossils in Yolo County, 21 are Pleistocene age and many are from the Modesto Formation (UCMP 2025f). The Pleistocene fossils include mammoth, giant ground sloth, saber-toothed cat, deer, and horse. Aggregate mining operations along lower Cache Creek have unearthed mammoth fossils in gravels mapped as the Modesto-Riverbank Formations since 1955 and found an isolated mammoth fossil discovery in the Tehama Formation at the mouth of the Capay Valley in 2004 (Baseline Environmental Consulting 2019). Seventy of the vertebrate fossil records for Yolo County are from the western margin of the county, which is in the Coast Ranges province. These records are from the Tehama Formation of Pliocene age and include fossils of fish, horses, and

rodent (UCMP 2025f). Numerous vertebrate fossils in the Tehama Formation are also recorded in several other California counties. This unit is therefore considered highly sensitive for paleontological resources. Other Tertiary deposits in the plan area may also be sensitive for paleontological resources. Numerous invertebrate marine fossils, for example, have been recovered from the Eocene-aged Capay Formation, which is exposed on the western side of the Capay Valley and is known to have a high paleontological sensitivity.

Yuba County

Yuba County straddles the Great Valley and Sierra Nevada geomorphic provinces. There are three UCMP records of vertebrate fossils in Yuba County (UCMP 2025g). The western portion of the county in the Great Valley province, however, is known to have higher rates of paleontological resources because the geologic units are the same as in Sacramento County and include Pleistocene sediments such as the Riverbank and Modesto Formations (Saucedo and Wagner 1992).

The sensitivity of the many geologic units in the foothills of the Sierra Nevada geomorphic province in Yuba County requires further study. Plutonic and metavolcanic units are unlikely to contain paleontological resources, but sedimentary and volcanic deposits could be sensitive for these resources.

3.6.3 Environmental Analysis

METHODOLOGY

The information used for this analysis is based on a review of existing and available information and is regional in scope. Regional data was collected from the DOC databases for active faults, landslides, and expansive soil potential. The California Department of Water Resources provides regional information on land subsidence and the University of California Museum of Paleontology has a publicly available database for paleontological resources discovered by region and geologic composition. Additionally, scientifically reviewed papers and journals support these databases and provide regional information for the 2025 Blueprint and the analysis herein.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the project could have a significant adverse effect related to geology, soils, and paleontological resources if it would:

- directly or indirectly expose people or structures to potential substantial adverse impacts, including the risk of loss, injury, or death through the rupture of a known earthquake fault, strong seismic shaking, seismic-related ground failure, soil liquefaction, or landslides;
- result in substantial soil erosion or the loss of topsoil;
- locate project facilities on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- locate project facilities on expansive soil, creating substantial direct or indirect risks to property;
- have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water; and/or
- directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

ISSUES NOT DISCUSSED FURTHER

All of the topics identified in the significance criteria above are addressed in the following analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.6-1: Directly or Indirectly Expose People or Structures to Potential Substantial Adverse Impacts, Including the Risk of Loss, Injury, or Death Through the Rupture of a Known Earthquake Fault, Strong Seismic Shaking, Seismic-Related Ground Failure, Soil Liquefaction, or Landslides

Regional Growth and Land Use Change

The risk of surface fault rupture in the plan area is generally low because of the scarcity of active faults. The only officially recognized active fault (having surface displacement within the last 11,000 years) on the current Alquist-Priolo Map is the Hunting Creek Fault (see Figure 3.6-3 above) at the very northwestern edge of Yolo County (DOC 2025c). The Hunting Creek Fault is in a predominately agricultural and open space area where no development is forecast to occur. Buried thrust faults and inferred faults are also located within the plan area; however, they do not have surface ruptures and are not officially recognized.

Due to the limited fault and seismic zones within the plan area, there are also no known soil liquefaction zones within the SACOG region (DOC 2025a). The risk of landslides caused by earthquakes is also generally low in most parts of the plan area and moderate in the Sierra Nevada Foothills because the region is generally level, not seismically active, and has a low probability of ground shaking (see Figure 3.6-7 above). However, the northwest and southwest portion of Yolo County, the northwest portion of Sutter County (at the Sutter Buttes), the middle to southern portion of El Dorado County, and most of Placer County east of Interstate-80 are at very high risk of landslide susceptibility or are identified as landslide hazard areas (refer to Figure 3.6-5). Most landslide-susceptible and landslide-hazard areas are located in predominantly agricultural and open space areas where no development is planned.

The Alquist-Priolo Act strictly regulates where regional growth can occur in relation to faults. All new development would be subject to local building codes and the CBC, which require implementation of design standards in seismically active areas in order to safeguard against major structural failures or loss of life. Local jurisdictions also require a site-specific geological investigation and analysis in accordance with standard industry practices and state-provided guidance. Site-specific geotechnical investigations are required under CBC, Title 24, Part 2, Chapter 18 and design and investigative work is also required to be evaluated according to CGS Special Publication 117A to minimize risk associated with landslides (CGS 2008). As a result, implementation of the 2025 Blueprint would not cause substantial adverse effects due to rupture of a known fault, strong seismic shaking, or seismic-related ground failure.

Transportation Network Improvements and Programs

As stated above, the risk of surface fault rupture in the plan area is generally low because of the scarcity of active faults. The Alquist-Priolo Act strictly regulates where the planned transportation improvements can occur in relation to faults. Hunting Creek Fault is in a predominately agricultural and open space area where no transportation improvements are planned. Because soil liquefaction is typically associated with seismic zones, it is unlikely that soil liquefaction would occur in the plan area and adversely affect transportation improvements. Further, because transportation improvements are required to adhere to the seismic design provisions of the CBC, and local building code requirements, as well as conduct site-specific geotechnical studies, there are no potential impacts from risks related to seismic-related ground failure in the region. Additionally, the planned transportation improvements are required to comply with state and local regulations related to seismic design and, therefore, are not likely to expose people or structures to substantial risk related to landslides.

Summary

The plan area has a relatively low potential for seismic activity, based on review of published geologic maps from DOC. Compliance with local regulations that require completion of project-level geotechnical studies and consistency with CBC requirements would reduce the potential for adverse effects related to strong seismic shaking through design features. In addition, the project area is generally not located on land prone to liquefaction or landslides. Small portions of land within the plan area have potential for liquefaction or landslides. These areas are limited to northern Yolo County, and steep terrain in the foothills of the coast range and Seirra foothills that are largely designated as

Rural Residential Communities, Agricultural and Natural Lands, and Lands Not Identified for Development in the MTP/SCS Planning Period. Due to the plan area's underlying geology and slope stability, the potential damage related to liquefaction and landslides would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.6-2: Result in Substantial Soil Erosion or the Loss of Topsoil

Regional Growth and Land Use Change

Based on the regional growth forecast, over 40,000 acres of land could be affected by construction of individual projects consistent with the 2025 Blueprint through 2050. Construction of the projects could result in soil erosion or the loss of topsoil due to exposed graded surfaces, and new development may increase water runoff, causing erosion problems. However, with the exception of the Sierra Nevada Foothills where moderate erosion hazards may be present, the plan area has limited to no erosion hazards. Further, all jurisdictions in the SACOG region have grading ordinances requiring a grading permit for major earthwork to minimize erosion and ensure that development in geologic hazard areas does not pose a threat to human life and property. While grading standards differ depending on the jurisdiction (e.g., project size, application requirements, approval process), all jurisdictions require submittal of a grading plan that includes erosion and sediment control measures for approval of a grading permit.

Earthwork and ground-disturbing activities, unless below minimum requirements, require a grading permit and compliance with local grading ordinances and best practices to minimize erosion potential. These regulations would ensure that construction practices include measures to protect exposed soils such as limiting work to dry seasons, covering stockpiled soils, and using straw bales and silt fences to minimize off-site sedimentation. Additional reports, such as a soil engineering report, engineering geology report, or plans and specifications for grading may be required by the local building or engineering departments, depending on the development proposal. The application, plans, and specifications (if any) would be checked by the appropriate building official or engineer and may be reviewed by other departments of the county or city to ensure compliance with the laws and ordinances under their jurisdiction. Earthwork recommendations for improved erosion controls, based on site conditions, would be incorporated into individual project construction documents.

To protect water quality, development that disturbs more than 1 acre would be subject to compliance with a NPDES permit, including the implementation of BMPs, some of which are specifically implemented to reduce soil erosion or loss of topsoil, and the implementation of a SWPPP through the local jurisdiction. BMPs required under a SWPPP include erosion prevention measures that have proven effective in limiting soil erosion and loss of topsoil. Projects that would disturb less than 1 acre would be subject to the CALGreen requirements related to stormwater drainage that have been designed to prevent or reduce discharges of sediments through BMPs that include on-site retention and filtration. Once construction of a project designed to manage stormwater runoff is complete and exposed areas are revegetated or covered by buildings, asphalt, or concrete, the erosion hazard is generally substantially eliminated or reduced.

As described above, the potential for erosion is relatively low in the plan area, but ground disturbance associated with projects that are consistent with the 2025 Blueprint would increase the potential for erosion to occur through ground disturbance and grading. Existing regulatory requirements specify mandatory actions that must occur during project development. These regulations would effectively reduce the potential for loss of topsoil or erosion impacts.

Transportation Network Improvements and Programs

Soil erosion and loss of topsoil could result from implementation of the 2025 Blueprint planned transportation improvements that involve the expansion or extension of the transportation system into previously undeveloped land, which usually involves grading or earthwork and increased impervious surfaces and removal of vegetative cover. Similar to regional growth land use projects, transportation network improvements and programs would be predominately located in areas with limited or no erosion hazard and would be subject to federal, state, and local regulations that minimize erosion and the loss of topsoil. Individual transportation network improvement projects

would be required to demonstrate their consistency with applicable geologic regulations, grading, and erosion mitigation planning on a project-level basis, as part of the project approval process. Therefore, transportation network improvements associated with the project would not result in substantial erosion or loss of topsoil.

Summary

Because of the natural topographical gradients of the plan area and because future construction projects would require grading activities, soil erosion from development of the 2025 Blueprint uses may occur. However, individual projects would be required to be in compliance with NDPES permits, associated BMPs for erosion control, and would submit a SWPPP or comply with CalGreen erosion prevention BMPs, which are proven methods to limit erosion and topsoil loss. Additionally, geotechnical reports and specific grading ordinances are often required to be completed by local jurisdictions for project approvals.

Based on compliance with federal, state, and local regulations, NDPES permits, grading ordinances, required geotechnical studies, and typical erosion control measures through the CalGreen requirements, regional growth and transportation network improvement programs of the 2025 Blueprint would not be anticipated to result in substantial erosion or the loss of topsoil. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.6-3: Be Located on Expansive Soil, Creating Substantial Direct or Indirect Risks to Life and Property or 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 On- or Off-Site Landslide, Lateral Spreading, Liquefaction, or Collapse

Regional Growth and Land Use Change

Projected land use pattern in the 2025 Blueprint could be located on geologic units or soils that are unstable, or that could become unstable and result in geologic hazards. As mentioned previously, the northwest and southwest portion of Yolo County, the northwest portion of Sutter County, the middle to southern portion of El Dorado County, and most of Placer County east of Interstate-80 are at very high risk of landslide susceptibility or identified as landslide hazards (see Figure 3.6-5 above). Lateral spreading and differential settlement pose a moderate hazard in the Great Valley geomorphic province which covers Sacramento, Sutter, and Yolo counties, as well as western El Dorado, Placer, and Yuba counties. Construction of new structures near relatively steep slopes could provide additional loading, causing landslides or slope failure from unstable soils or geologic units. Structures, including residential units and commercial buildings, could be damaged as a result of a landslide or mudslide from unstable soils or geologic units. The loading associated with new construction could also induce differential settlement and ground collapse, particularly in the Great Valley geomorphic province.

Slope failure can occur naturally through rainfall or seismic activity, or through earthwork and grading related activities. The potential for earthwork and grading to create unstable soils and cause slope failure is addressed largely through the integration of geotechnical information in the planning and design process. Local soil suitability for specific projects is determined in accordance with standard industry practices and state-provided guidance, such as CGS Special Publication 117A, used to minimize the risk associated with these hazards. Soil exploration and index testing analysis are typically required for individual projects to determine if individual project sites contain expansive soils, slope instability, or are in an unstable geologic unit. Corrective measures, such as structural reinforcement for unstable geologic units and using engineered fill to replace unstable soils, would be required for the design of individual future projects. These measures generally are enforced through compliance with local requirements for geotechnical stability and local building codes and ordinances, to avoid or reduce hazards relating to unstable soils and slope failure.

All site designs would be reviewed and approved by the appropriate federal, State, and local agencies. Project-specific geotechnical investigations consistent with existing regulatory requirements would identify areas of potential

concern and recommend geotechnical measures for long-term stability, ensuring that regional growth and the projected land use pattern would not result in unstable soil conditions.

With adherence to grading permit and building code requirements, including seismic design criteria as required by the CBC, Special Publication 117A, and local building code requirements, all improvements associated with land use development would be designed to minimize potential risks related to unstable soils and geologic units. Because all land use development is subject to state and local requirements for geotechnical stability that specify mandatory and relatively prescriptive actions that must occur during project development, the potential for landslide, lateral spreading, subsidence, liquefaction, or collapse impacts related to the projected land use pattern would be addressed during individual project planning.

Transportation Network Improvements and Programs

The planned transportation improvements would be located on a range of different geologic materials and conditions. Hazards associated with unstable soils or geologic units are dependent on site- specific conditions, as well as the specific nature of the individual projects proposed. With adherence to grading permit and building code requirements, including seismic design criteria as required by the CBC, Caltrans, Special Publication 117A, and local building code requirements, all improvements associated with planned transportation improvements would be designed to minimize potential risks related to unstable soils and geologic units. Because transportation improvements are subject to state and local requirements for geotechnical stability that specify mandatory and relatively prescriptive actions that must occur during project development, the potential for landslide, lateral spreading, subsidence, liquefaction, or collapse impacts related to transportation improvements in not substantial.

Summary

There is land within the SACOG region that is susceptible to liquefaction, landslides, and lateral spreading. As part of federal, state, and local project approval and review process, a site-specific, project-specific geotechnical report would be prepared. Any recommendations related to soil compaction or unstable soils would be incorporated into the project through the local permitting and approval process. Land use and planned transportation improvements in the SACOG region are not likely to result in landslide, lateral spreading, subsidence, liquefaction, or collapse because all land use development and transportation improvement are subject to state and local geotechnical requirements. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.6-4: Locate Project Facilities on Expansive Soil, Creating Substantial Direct or Indirect Risks to Property

Regional Growth and Land Use Change

The projected growth identified in the Development Pattern of the 2025 Blueprint could result in new structures located on expansive soil, which would create risks to life or property. However, most areas in the plan area have little to no expansive soils or contain expansive soils with slight to moderate swelling potential (Figure 3.6-4). Where discrete areas of expansive soils may be present in the plan area, these areas would be discovered by geotechnical analysis that would be necessary for individual project approval processes. Geotechnical information is required to be gathered during planning and design process for development projects to determine the local soil suitability for specific projects in accordance with standard industry practices and state-provided guidance used to minimize the risk associated with these hazards. Additionally, the CBC contains a provision that provides for a preliminary soil report to be prepared to identify "…the presence of critically expansive soils or other soil problems which, if not corrected, would lead to structural defects" (CBC Chapter 18, Section 1803.1.1.1). These measures generally are enforced through compliance with CBC requirements, as well as local building codes and ordinances, to avoid or reduce hazards relating to expansive soils.

Transportation Network Improvements and Programs

As described above, most of the soils in the plan area experience little to no swelling, while soils in the western portion of the plan area are subject to slight to moderate swelling. Implementation of the 2025 Blueprint would include a transportation improvements throughout the plan area. These planned transportation improvements would also be required to comply with state and local regulations related to geotechnical safety, which address the potential for substantial risks to life or property from developing on expansive soil.

Summary

Expansive soils are present in the plan area; however, the majority of the plan area has little to no expansive soil. Northwestern Yolo County is the only place in the SACOG region where expansive soils with high swelling potential exist. There is no development planned for this area. Regulatory compliance on an individual project basis would address the potential that the 2025 Blueprint would not result in projects on expansive soils that may create a substantial direct or indirect risk to property. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.6-5: Have Soils Incapable of Adequately Supporting the Use of Septic Tanks or Alternative Wastewater Disposal Systems Where Sewers Are Not Available for the Disposal of Wastewater

Regional Growth and Land Use Change

Sewer systems are required for new development in most of the plan area. However, SWRCB identifies certain densities that can instead rely on a traditional septic tank or alternative septic system depending on the amount of annual average rainfall that an area receives. OWTS are regulated at the state, regional, and local level. Local jurisdictions also have general plans that contain policies and implementation measures, including BMPs relevant to the use of septic tanks or alternative water disposal systems, and county environmental health departments regulate septic tanks through measures such as requiring a Sewage Disposal Permit for construction, re-construction, repair, or abandonment of septic tanks. In terms of alternative water disposal systems, the same measures would be enforced.

The 2025 Blueprint does not directly propose any septic systems or alternative wastewater disposal systems. The 2025 Blueprint would guide growth into Center and Corridor Communities, Established Communities, and Developing Communities. Growth in these more densely developed and developing areas would be served by public sewer systems. A portion of the 1 percent of new housing growth that occurs in Rural Residential Communities through 2050 may be served by OWTS. If individual projects do propose these systems in the design, they would be subject to county environmental health departments' regulations for septic tanks through measures such as requiring a Sewage Disposal Permit for construction, re-construction, repair, or abandonment of septic tanks. These types of regulations provide performance standards for OWTS to protect the environment and public health. Compliance with state and local regulations would address any soil incompatibility with a traditional septic system and require use of appropriately engineered OWTS.

Transportation Network Improvements and Programs

Planned transportation improvements in the 2025 Blueprint would not require septic tanks or alternative water disposal systems.

Summary

The 2025 Blueprint would not result in the installation of septic systems or alternative wastewater disposal systems in soils that are incapable of supporting these systems. Where the regional growth pattern includes low density growth in areas not served by public sewer systems, OWTS may be included in project designs subject to reviews and approval by the county environmental health departments. This impact would be **less than significant**

Mitigation Measures

No mitigation is required for this impact.

Impact 3.6-6: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature

Regional Growth and Land Use Change

This impact concerns potential effects on paleontological resources at the regional level, based on the presence of sensitive geological units, which indicate if a paleontological resource is more likely to be affected. Additionally, although surficial paleo-resources may have been disturbed and obscured in previously developed areas or in agricultural areas, this does not preclude the potential for buried paleontological resources because the potential generally increases with depth.

As discussed in Section 3.6.2, "Environmental Setting," geologic units known as sensitive for paleontological resources are widespread in the plan area, particularly in the Sacramento Valley and adjacent lower foothills. Depending on location, rock units sensitive for paleontological resources may be exposed on the surface by fluvial actions or as outcrops, found at depth beneath younger sediments, or found beneath only a thin veneer of surficial soils or Holocene fan or alluvial deposits. Because excavations in Sacramento and Yolo counties discovered fossils in Riverbank Formations at the surface level, and at minimum depths of 3 and 12 feet, it is hard to predict where paleontological resources may be discovered even within more developed areas.

Direct permanent impacts to paleontological resources from the projected growth forecast in the Development Pattern of the 2025 Blueprint may result from ground disturbance associated with construction. Ground-disturbing activities such as excavation for building foundations and bridges, trenching for utility lines, tunneling, and grading, could damage or destroy sensitive paleontological resources on or near the surface or at depth. Construction in previously undisturbed areas and deep excavation activities would have the greatest probability of affecting intact buried paleontological resources. The potential to directly affect paleontological resources may be comparatively less for improvements to existing facilities and modifications to existing rights-of-way since these areas have been previously disturbed. However, any construction in geologic units sensitive for paleontological resources could result in damage to or destruction of unique paleontological resources.

Permanent effects may occur if paleontological resources cannot be completely avoided by project design. Substantial damage to or destruction of paleontological resources is defined by the SVP (2010) and could occur during construction projects. Excavation of the sediments and any significant fossils could destroy or degrade the condition of the fossils; additionally, the nature of project excavation could cause any fossils to be removed from their stratigraphic context, thereby reducing the scientific usefulness of the fossil. The extensive distribution and presence of rock units below the ground surface that may contain fossilized remains makes it difficult to predict the location of paleontological resources during the project planning phase and thus increases the likelihood of inadvertent discovery of paleontological resources during construction and ground-disturbing activities.

As discussed above in Section 3.6.2, "Environmental Setting," unique geologic features are generally in rural portions of the plan area outside of Center and Corridor Communities and Established Communities; however, because examples exist of the discovery of fossils in urban areas that have already had ground disturbing activities, construction may cause potential permanent effects on paleontological resources due to the regional growth pattern contemplated in the 2025 Blueprint.

Transportation Network Improvements and Programs

Similar to the analysis above, ground disturbance from construction of planned transportation improvement in the 2025 Blueprint could cause permanent effects to paleontological resources. Ground-disturbing activities could damage or destroy sensitive paleontological resources on or near the surface or at greater depths. Construction in previously undisturbed areas and deep excavation activities would have the greatest probability of damaging intact buried paleontological resources. The potential for direct impacts to paleontological resources may be comparatively less for improvements to existing facilities and modifications to existing rights-of-way since these areas have been previously disturbed. However, any construction in geologic units sensitive for paleontological resources could result in potentially significant damage to or destruction of unique paleontological resources. The transportation projects would likely have a similar effect on paleontological resources as described above for regional growth and land use changes.

Summary

Paleontological resources and unique geological features exist in El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties. The 2025 Blueprint proposes to manage the predicted growth to the plan area, and paleontological resource discovery is not correlated to land use type, but rather to sensitive geological units present in a location. Where development occurs in these sensitive areas, the substantial alteration or removal of a significant paleontological resource could occur during construction. Therefore, implementation of the 2025 Blueprint could inadvertently destroy paleontological resources during construction and the impact would be **potentially significant**.

Mitigation Measures

SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measure or other comparable measures identified by the lead agency at a project level would reduce the impacts to unique paleontological resources, and agencies with jurisdiction to adopt these measures should do so (PRC Section 21081).

Mitigation Measure 3.6-1: Site-specific Paleontological Resources Inventory Assessment and Construction Monitoring by a Paleontologist

Prior to initiating any construction in bedrock, a qualified professional paleontologist shall prepare a paleontological resources inventory and assessment for any affected rock units. This report shall include the following components:

- A report of any fossils observed during a reconnaissance-level field survey.
- The results of a records search of appropriate paleontological databases (at a minimum, the database at the University of California, Berkeley Museum of Paleontology) to determine whether any previously recorded fossil localities are located within or immediately adjacent to the area where rock boring is proposed.
- A determination as to whether the geologic formations are of high or low paleontological sensitivity, and a discussion supporting the reasons why the sensitivity determinations were made.

If the rock formation is determined to be of high paleontological sensitivity, a paleontological monitor will be present during construction to monitor potential impacts on paleontological resources. If resources are identified during construction, work will stop within 100 feet of the resource until the resource can be evaluated and the recommendations of the paleontologist followed. Prior to issuance of grading permits that would allow for boring in bedrock, the approving local jurisdiction will review the report and findings to confirm no paleontological resources would be affected.

Significance after Mitigation

Implementation of Mitigation Measure 3.6-1 would reduce the potential for the proposed project to directly or indirectly destroy a paleontological resource by requiring that a paleontologist assess the potential for paleontological resources to occur in a geologic unit that would be disturbed by construction. If there is a potential for resources to exist, a paleontological monitor would be present during construction and would stop work if a resource is encountered until it can be evaluated. All recommendations from the paleontologist would be followed to protect the resource. Compliance with this mitigation measure would reduce the impact of the proposed project related to the destruction of a paleontological resource to a less-than-significant level. However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, this impact would be **significant and unavoidable** for purposes of this program-level review.

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3.7 GREENHOUSE GAS EMISSIONS AND ENERGY

This section presents a summary of regulations applicable to greenhouse gas (GHG) emissions and energy; a summary of climate change science and GHG sources in California; quantification of GHG emissions; and evaluation of the potential for the 2025 Blueprint to result in inefficient, wasteful, and unnecessary consumption of energy. In addition, mitigation measures are recommended to reduce the 2025 Blueprint's contribution to climate change.

In response to the notice of preparation, SACOG received a comment that expressed concern regarding SACOG's ability to meet GHG emission reduction goals. This comment is addressed in the analysis of impacts in this section. Appendix A includes all comments received in response to the notice of preparation and a summary of the scoping meetings.

3.7.1 Regulatory Setting

FEDERAL

Massachusetts v. Environmental Protection Agency

The US Supreme Court ruled in Massachusetts v. Environmental Protection Agency, 127 S. Ct. 1438 (2007), that carbon dioxide (CO_2) and other GHGs are pollutants under the federal Clean Air Act (CCA), which the US Environmental Protection Agency (EPA) must regulate if it determines those GHGs pose an endangerment to public health or welfare.

Endangerment Finding and Cause or Contribute Finding

On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under CAA Section 202(a) (42 United States Code Section 7521).

- Endangerment Finding: The Administrator found that the current and projected concentrations of the six key well-mixed GHGs (CO_2, methane [CH_4], nitrous oxide [N_2O], hydrofluorocarbons [HFCs], perfluorocarbons [PFCs], and sulfur hexafluoride [SF_6]) in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator found 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.

Mandatory Reporting Rule

The EPA adopted a mandatory GHG reporting rule in September 2009. The rule requires suppliers of fossil fuels or entities that emit industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more of GHG emissions to submit annual reports to the EPA beginning in 2011. Vehicle and engine manufacturers were required to begin reporting GHG emissions starting with model year 2011.

Fuel Economy Standards

In 2024, Corporate Average Fuel Economy (CAFE) standards were finalized for model years (MYs) 2027 through 2031. The final rule establishes standards that require an industry-wide fleet average of approximately 49 miles per gallon (mpg) for passenger cars and light trucks. The final rule establishes standards that would require an industry-wide fleet average of approximately 50.4 mpg in MY 2031 for passenger cars and light trucks and an industry fleet-wide average for heavy-duty pickup trucks and vans (HDPUVs) of roughly 2.851 gallons per 100 miles in MY 2035. The final CAFE standards increase at a rate of 2 percent per year for passenger cars in MYs 2027–2031 and 2 percent per year for light trucks in model years 2029–2031. The final HDPUV fuel efficiency standards increase at a rate of 10 percent per year in MYs 2030–2032 and 8 percent per year in MYs 2033–2035 (NHTSA 2024).

Heavy-Duty Vehicle Program

EPA and NHTSA also set fuel efficiency and GHG standards for medium- and heavy-duty trucks. In 2011, EPA and NHTSA finalized a joint rule that established a national program to reduce GHG emissions and improve fuel economy for new medium- and heavy-duty engines and vehicles. This rule—called the Phase 1 standards—requires fuel efficiency standards for engines in model years 2014 through 2018. In 2016, EPA and NHTSA adopted the Phase 2 standards, which require fuel efficiency standards for engines in model years 2018 through 2027 (EPA 2016).

STATE

The State has adopted various laws addressing various aspects of climate change, GHG mitigation, energy efficiency, and renewable energy. Much of this establishes a broad framework for the State's long-term GHG and energy reduction goals and climate change adaptation program. Governors have also issued several EOs related to the State's evolving climate change policy. A summary of key laws, regulations, plans, and policies relevant to the proposed plan is provided below, organized by general categories.

Executive Orders

There are four primary EOs related to the State's GHG reduction efforts. In general, EOs provide direction to State government agencies but do not place mandates on regional or local governments or the private sector.

EO S-03-05:

Issued by Governor Arnold Schwarzenegger on June 1, 2005, California Governor's EO S-3-05 set intermittent emissions reduction targets intended to provide incremental progress toward Assembly Bill (AB) 32's GHG emissions reduction target of reducing emissions to 1990 levels by 2020. EO S-3-05 set forth the following GHG reduction targets:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

EO S-30-15:

On April 15, 2015, Governor Edmund G. Brown Jr. issued EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. EO B-30-15 was issued to align California's GHG emissions reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris, held in 2015. The emissions reduction target of 40 percent below 1990 levels by 2030 is intended to keep California on track to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050.

EO B-55-18:

This EO established a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." It directs the California Air Resources Board (CARB) to ensure future Climate Change Scoping Plans (discussed below) identify and recommend measures to achieve the carbon neutrality goal.

EO N-19-19:

Among other things, this EO required the Department of Finance to create a Climate Investment Framework; and required the State Transportation Agency to align transportation spending with achieving objectives of the Climate Change Scoping Plan, and to reduce vehicle miles traveled (VMT) through strategic discretionary investments. In July 2021, the California State Transportation Agency adopted the Climate Action Plan for Transportation Infrastructure (CAPTI). The CAPTI was prepared in the wake of EO N-19-19 and serves an integrated climate change infrastructure plan (CalSTA 2021).

Legislative GHG Reduction Targets

State law sets forth the following requirements for reducing Statewide levels of GHG emissions by 2020 and 2030.

Assembly Bill 32, Health & Safety Code Section 38500 et seq.

AB 32 required CARB to develop a Scoping Plan that describes California's strategy for achieving the 2020 target and to update it every 5 years.

Senate Bill 32, Health & Safety Code Section 38566.

Adopted in tandem with Senate Bill (SB) 32, AB 197 of 2016 (Chapter 250, Statutes of 2016) required CARB, in implementing SB 32's 2030 GHG reduction target, to (1) prioritize emissions reductions to consider the "social costs" of GHG emissions and (2) prioritize "direct emission reductions" at large stationary sources and at mobile sources.

AB 1279, Health and Safety Code Section 38562.2.

On September 16, 2022, the California Legislature enacted AB 1279, which codified stringent emissions targets for the State of achieving carbon neutrality no later than 2045 and negative emissions thereafter, and an 85 percent reduction in 1990 emissions level by 2045. (This superseded the previous GHG emissions reduction target set forth by EO S-3-05.)

State Agency GHG Reduction Plans and Strategies

CARB and other State agencies have adopted several plans and strategies to reduce Statewide GHG emissions, as described below.

Scoping Plan

Adopted in 2008 and updated in 2014, the initial Scoping Plan and First Update recommended measures to reduce emissions from a variety of activities and sources, including on-road transportation, electricity generation, building energy use, and uses of high global warming potential (GWP) gases. It also recommended that local governments set goals to reduce their municipal and communitywide emissions to 15 percent below existing (at the time of scoping plan adoption) levels by 2020 to match the State's 2020 reduction target (CARB 2008). The initial Scoping Plan and its First Update were replaced by the 2017 Scoping Plan, which was approved by CARB in 2017. The 2017 Scoping Plan identifies measures for how California can achieve the 2030 target set forth in SB 32, and substantially advance toward the 2050 reduction goal identified in EO-S-3-05.

After AB 1279 was enacted, CARB released the *Final 2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) on November 16, 2022, as also directed by AB 1279 (CARB 2022a). The 2022 Scoping Plan traces the pathway for the State to achieve its carbon neutrality and an 85 percent reduction in 1990 emissions goal by 2045, as well as the short-term GHG reduction goal of 40 percent below 1990 emissions by 2030 pursuant to SB 32. Notably, the 2022 Scoping Plan pathway to carbon neutrality by 2045 demonstrates that the State would need to achieve a 48 percent reduction in statewide emissions by 2030 to meet this ambitious target by 2045. CARB adopted the 2022 Scoping Plan on December 16, 2022.

Mobile Source Strategy

Developed by CARB to provide an integrated planning perspective and common vision for transforming the mobile sector to achieve air quality and climate change goals, this strategy uses conceptual scenarios to illustrate the emissions reduction potential of different vehicle technology mixes and VMT reductions to inform State policy development. The Mobile Source Strategy addresses on-road vehicles including passenger cars and light duty trucks, medium and heavy-duty trucks, buses, as well as off-road vehicles and equipment, including locomotives, cargo handling equipment, and construction equipment. It supports multiple planning efforts, including the State Implementation Plans for criteria air pollutants, the Scoping Plan, the SLCP Reduction Strategy (discussed below), and the Sustainable Freight Action Plan (discussed below). The 2020 Mobile Source Strategy was approved by CARB and released on October 28, 2021, and will be updated every 5 years. Notably, CARB has rescinded its waiver request for some regulations concerning mobile-source emissions, either partially or in their entirety. This includes the Advanced Clean Fleets (ACF) Regulation and Transportation Refrigeration Unit (TRU) Regulation, discussed below. Because the ACF Regulation was not granted a waiver authorizing its addition to CARB's emissions control program, potential reductions in mobile source emissions related to implementation of the ACF Regulation would not be realized as

assumed in the 2020 Mobile Source Strategy. Similarly, EPA did not grant California Clean Air Act authorization for some elements of the TRU Regulation until January 2025 (discussed below). Thus, the 2020 Mobile Source Strategy, which relied on emissions reductions from these regulations, may not be capable of meeting its ultimate targets. It is foreseeable that future iterations of the Mobile Source Strategy would not include emissions reductions estimates related to regulations/rules or portions of regulations/rules for which CARB's waiver request has been rescinded, or would include other regulatory mechanisms to reduce mobile source emissions.

Transportation Refrigeration Units

CARB's 2022 amendments to the 2004 TRU Airborne Toxic Control Measure increases the stringency of TRU fine particulate matter ($PM_{2.5}$) regulations and require the electrification of diesel-powered TRU trucks by 2029. While the regulation targets emissions of $PM_{2.5}$, the regulation would have the co-benefit of reducing GHG emissions by increasing utilization of electric TRUs and, thereby, reducing fossil fuel consumption. On January 3, 2025, EPA granted California Clean Air Act authorization of elements of its TRU Regulation. However, in its action, EPA did not act on the zero-emission elements of the TRU Regulation regarding requirements for the turnover of at least 15 percent of the diesel-fueled truck TRU fleet to zero-emission TRU by December 31, 2023, (and each year thereafter). On January 13, 2025, CARB withdrew its request for authorization of these zero-emission TRU requirements (CARB 2025a).

Sustainable Freight Action Plan

This plan establishes clear targets to improve freight efficiency, transition to zero-emission technologies, and increase the competitiveness of California's freight system. The Sustainable Freight Action Plan (SFAP) was developed by several State agencies and is a recommendation document that integrates investments, policies, and programs across several State agencies to help realize a singular vision for California's freight transport system. The SFAP recommends a high-level vision and broad direction for State agencies to utilize when developing specific investments, policies, and programs related to the freight transport system that serves California's transportation, environmental, and economic interest. The Scoping Plan incorporates potential actions from the SFAP that provide GHG emissions reduction benefits (CARB 2016).

Short-Lived Climate Pollutant Strategy

SB 1383 (Chapter 395, Statutes of 2016) requires CARB to develop and implement a SLCP Strategy with the following reductions in emissions by 2030 compared to 2013 levels: methane by 40 percent, HFCs by 40 percent, and black carbon (non-forest) by 50 percent. The bill also specifies targets for reducing organic waste in landfills. SB 1383 also requires CARB to adopt regulations to be implemented on or after January 1, 2024, specific to the dairy and livestock industry, requiring a 40 percent reduction in methane emissions below 2013 levels by 2030, if certain conditions are met. Lastly, the bill requires CalRecycle to adopt regulations to take effect on or after January 1, 2022, to achieve specified targets for reducing organic waste in landfills.

Per its directive, CARB adopted the SLCP Strategy in 2017, establishing a path to decrease SLCPs from various sectors of the economy. Strategies span from wastewater and landfill practices and methane recovery to reducing natural gas leaks and consumption. The SLCP strategy also identifies measures that can reduce HFC emissions through incentive programs and limitations on the use of high-GWP refrigerants in new refrigeration and air-conditioning equipment (CARB 2017).

Draft 2030 Natural and Working Lands Implementation Plan

In a joint interagency effort, the California Environmental Protection Agency (CalEPA), California Department of Food and Agriculture (CDFA), California Natural Resources Agency (CNRA), CARB, and California Strategic Growth Council (CSGC) released the Draft California 2030 Natural and Working Lands Climate Change Implementation Plan in January 2019 (and updated in April 2019 to include errata). The draft plan is specific to the natural and working lands sector, which includes farmland, rangeland, forests, grasslands, wetlands, riparian areas, seagrass, and urban green space. The plan addresses the carbon flux from this sector, including the ever-dynamic changes in both GHG emissions and carbon sequestration associated with the management of these lands, and includes reduction of GHGs and black carbon from forest fires and fire management. It is a multidisciplinary approach to conserve and maintain a resilient natural and working lands sector that will gradually shift the natural and working lands sector from being a net carbon emitter to being a net carbon sink, while also improving air quality, water quality, wildlife habitat, recreation, and providing other benefits.

The draft plan sets goals for, at a minimum, increasing the rate of State-funded soil conservation practices fivefold, doubling the rate of State-funded forest management and restoration efforts, tripling the rate of State-funded oak woodland and riparian reforestation, and doubling the rate of State-funded wetland and seagrass restoration. The measures included in the draft plan are projected to result in cumulative emissions reductions of -36.6 to -11.7 million metric tons (MMT) of carbon dioxide equivalent (CO_2e) by 2045 (CalEPA et al. 2019).

Transportation Planning

SB 375, Chapter 728, Statutes of 2008

Under California's Sustainable Communities and Climate Protection Act, or SB 375 (Statutes of 2008, Chapter 728), SACOG is required to adopt an SCS as part of every MTP that aligns transportation, housing, and land use decisions to help achieve the per-capita reduction targets for GHG emissions from passenger vehicles that are set by CARB. While other efforts to reduce GHG emissions focus on alternative fuels and vehicle efficiency, SB 375 is intended to reduce emissions by coordinating land use and transportation planning at the regional level. SB 375 requires MPOs to develop an SCS as a component of a regional transportation plan, with the purpose of identifying policies and strategies to reduce per-capita passenger vehicle-generated GHG emissions.

Under SB 375, CARB must agree that SCSs are able to meet GHG reduction targets. For this purpose, in September 2019, CARB published updated SCS Program and Evaluation Guidelines, clarifying the scope of the updated strategy-based SCS evaluation process, which consists of four key components:

- **Tracking implementation under SB 150.** Report on the progress regions have made towards meeting their SB 375 GHG reduction targets.
- **Policy Commitments.** Determine whether the planned strategies and commitments, when fully and effectively implemented, would achieve the GHG reduction targets, and whether there are any risks to not achieving those commitments.
- **Incremental Progress.** Report on whether an MPO's proposed SCS has more or enhanced strategies than the currently adopted SCS.
- **Equity.** Report on the efforts that MPOs are taking to meet federal and State requirements related to equity.

Under SB 375, the 2025 Blueprint is subject to review and approval by CARB. Specifically, the SCS component of the regional plan will be reviewed by CARB to determine whether the adopted SCS, if implemented, would meet the region's 19 percent per capita GHG reduction target. If the combination of strategies in the SCS would not meet the regional targets, SACOG must prepare an "alternative planning strategy" to meet the regional GHG emissions reduction target. The Policy Commitments component is the only component used by CARB as the basis for accepting or rejecting the MPO's SB 375 GHG emission reduction target determination (CARB 2019).

Mobile Sources

Advanced Clean Cars Program (Passenger Vehicles)

AB 1493 of 2002 (known as Pavley I, Chapter 200, Statutes of 2002) provided the nation's first GHG standards for automobiles. AB 1493 required CARB to adopt vehicle standards that lowered GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards referred to as the Advanced Clean Cars (ACC) Program's Low Emission Vehicle III Regulation was adopted for vehicle model years 2017–2025 in 2012 (13 California Code of Regulations [CCR] Section 1900 et seq.).

The ACC Program also includes the Zero Emission Vehicle Program and the Clean Fuels Outlet Regulation. The Zero Emission Vehicle Program is designed to achieve California's long-term emission reduction goals by requiring manufacturers to offer for sale specific numbers of zero-emission vehicles (ZEVs), which include battery electric, fuel cell, and plug-in hybrid electric vehicles. The Clean Fuels Outlet regulation is intended to ensure that fuels such as electricity and hydrogen are available to meet the fueling needs of new advanced technology vehicles as they come to market. The ACC II Program was adopted by CARB in August 2022, and provides the regulatory framework for ensuring the sales requirement goal of EO N-79-20 to ultimately reach 100 percent ZEV sales in the state by 2035.

The ACC II Program builds upon the existing ACC program and establishes more stringent ZEV sales requirements for future benchmark years. CARB also established more stringent GHG emission standards and fuel efficiency standards for fossil fuel–powered on-road vehicles than the US Environmental Protection Agency. In addition, the program's ZEV regulation requires battery, fuel cell, and plug-in hybrid electric vehicles (EVs) to account for up to 15 percent of California's new vehicle sales by 2025 (CARB 2018). The ACC II Program also sets sales requirements to ultimately reach the goal of 100 percent ZEV sales in the state by 2035.

Low Carbon Fuel Standard

In September 2018, to help achieve, SB 32's emission reduction target, the LCFS regulation was amended to increase the statewide goal to a 20 percent reduction in carbon intensity of California's transportation fuels by at least 2030. Note that the majority of the emissions benefits due to the LCFS come from the production cycle (upstream emissions) of the fuel rather than the combustion cycle (tailpipe) (CARB 2020).

Medium- and Heavy-Duty Vehicles

In 2008, CARB approved the Phase 1 Tractor-Trailer Greenhouse Gas Regulation to reduce GHG emissions by requiring the use of aerodynamic tractors and trailers that are also equipped with low rolling resistance tires (13 CCR Section 2020 et seq.). The regulation applies to certain Class 8 tractors manufactured for use in California and is harmonized with the parallel EPA and NHTSA Phase 1 heavy-duty truck standards. CARB amended the Tractor-Trailer Greenhouse Gas Regulation in 2019 (Phase 2 standards) to align with EPA and NHTSA Phase 2 heavy-duty truck standards.

EO B-16-12 and EO B-48-18

On March 23, 2012, Governor Brown issued EO B-16-2012 to encourage the use of ZEVs and related infrastructure. The EO orders CARB, the California Energy Commission (CEC), the California Public Utilities Commission (CPUC), and other relevant agencies to work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks concerning ZEVs. By 2025, EO B-16-2012 aims to put over 1.5 million ZEVs on California roads and displace at least 1.5 billion gallons of petroleum. EO B-48-18 set an expanded target of 5 million ZEVs on the road by 2030, as well as a network of 200 hydrogen fueling stations and 250,000 EV charging stations, including 10,000 direct current (DC) fast chargers, installed or constructed by 2025 (US Department of Energy n.d.).

EO N-79-20

Signed by Governor Newsom on September 23, 2020, EO N-79-20 provides even more ambitious goals and requirements. These include 100 percent of in-state sales of passenger cars and trucks being ZEVs by 2035; 100 percent of operating medium- and heavy- duty vehicles being ZEVs by 2045; and 100 percent of drayage trucks and off-road vehicles and equipment being ZEVs by 2035. The order also tasks CEC with providing an updated assessment of the infrastructure needed to support this level of ZEV adoption.

The Governor's Interagency Working Group on ZEVs developed the ZEV Action Plan, issued in 2013 and subsequently updated in 2016 and 2018, to identify actions that support the State's ZEV goals. Some actions in the ZEV Action Plan that are particularly relevant to the Clean Transportation Program include ensuring ZEVs are accessible to a broad range of Californians and making ZEV technologies commercially viable in the medium- and heavy-duty and freight sectors. Many recommendations in the ZEV Action Plan have been captured in the Clean Transportation Program since the inception of the program and continue to be program priorities.

Zero Emission Trucks

CARB adopted the Advanced Clean Trucks (ACT) Regulation in June 2020, which aims to accelerate the sales of heavy-duty EVs. It consists of two parts, a manufacturer component and a fleet reporting component. Manufacturers are required to sell an increasing percentage of heavy-duty zero-emission vehicles between 2024 and 2035. By 2035, 40 percent of Class 8 truck purchases will be required to be zero emission. Fleets with 50 or more vehicles will be required to report on their fleet's composition and activities in order to help CARB craft new strategies to hasten the adoption of zero-emission vehicles (CARB 2021).

Advanced Clean Fleets

CARB's 2022 Advanced Clean Fleets regulation was developed to reduce diesel PM through the transition of medium- and heavy-duty trucks to become fully electric by 2045. At the time of the writing of this Draft EIR, California has withdrawn its request for a waiver and authorization for the addition of the Advanced Clean Fleets regulation to its emissions control program (CARB 2025b). CARB is not enforcing the existing portions of the Advanced Clean Fleets regulation that require a federal waiver or authorization, such as the portions of the Advanced Clean Fleet regulation that apply to high priority and drayage fleets. However, not all elements of the Advanced Clean Fleets regulation require a federal waiver or authorization (CARB 2025b). The state and local government fleets portion of the Advanced Clean Fleets regulation remains unaffected.

Innovative Clean Transit

CARB's Innovative Clean Transit (ICT) Regulation (13 CCR Section 2023) requires all public transit agencies to gradually transition to a 100 percent zero-emissions bus fleet and encourages them to provide innovative first and last mile connectivity and improved mobility for transit riders. The ICT Regulation requires that 25 percent of new bus purchases for large transit agencies are zero-emission starting in 2023, extending to 100 percent in 2029. By 2026, 25 percent of small transit agencies' new bus purchases must be zero-emission, extending to 100 percent in 2029.

Energy Sources

Renewables Portfolio Standard

The program sets continuously escalating renewable electricity procurement requirements for the State's load-serving entities. Generation must be procured from Renewables Portfolio Standard (RPS)-certified facilities. CPUC and CEC are jointly responsible for implementing the program.

SB 1020

This bill superseded the goals of SB 100 by requiring that eligible renewable energy resources and zero-carbon resources supply 90 percent of all retail sales of electricity to California end-use customers by December 31, 2035, increasing to 95 percent by December 31, 2040, and 100 percent by December 31, 2045; and that eligible renewable energy resources and zero-carbon resources supply 100 percent of electricity procured to serve all State agencies by December 31, 2035.

Integrated Energy Policy Report

SB 1389 (Chapter 568, Statutes of 2002) required CEC to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. CEC shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety" (PRC Section 25301[a]). This work culminated in the Integrated Energy Policy Report (IEPR). CEC adopts an IEPR every 2 years and an update every other year. The 2023 IEPR is the most recent IEPR, including the 2024 Update to the 2023 IEPR. The 2023 IEPR provides a summary of priority energy issues currently facing the State, outlining strategies and recommendations to further the State's goal of ensuring reliable, affordable, and environmentally responsible energy sources. The report contains an assessment of major energy trends and issues within California's electricity, natural gas, and transportation fuel sectors. The report provides policy recommendations to conserve resources, protect the environment, ensure reliable, secure, and diverse energy supplies, enhance the state's economy, and protect public health and safety. Topics covered in the 2023 IEPR include the accelerated connection of clean energy, the California Energy Demand Forecast, the potential growth of hydrogen in the State, and updates to energy efficiency, gas utility decarbonization, and the Clean Transportation Program (CEC 2024a).

Building Efficiency

California Building Energy Efficiency Standards (Title 24, Part 6 and Part 11)

The energy consumption of new residential and nonresidential buildings in California is regulated by the State's Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). CEC updates the California Energy Code every 3

years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions. The 2022 California Energy Code is the iteration of the code that is currently enforced. The 2025 Building Energy Efficiency Standards (2025 California Energy Code) were adopted on September 11, 2024 and will go into effect on January 1, 2026. According to CEC, the 2025 California Energy Code puts particular emphasis on encouraging efficient electric heat pump technology for space and water heating in newly constructed single-family, multifamily, and select nonresidential building types, replacing end-of-life rooftop heating, ventilation, and air-conditioning (HVAC) units of a certain size with high efficiency systems, establishing electric-ready requirements for commercial kitchens and some multifamily buildings, updating solar and storage standards for assembly buildings to make clean energy available for onsite use while minimizing exports to the electrical grid, and increasing ventilation standards to improve indoor air quality in multifamily buildings. CEC estimates that the 2025 California Energy Code is projected to save $4.8 billion in energy costs over its lifetime and reduce GHG by about 4 million metric tons, equivalent to the annual energy consumption of over half a million homes (CEC 2024b).

CalGreen was added to Title 24 as Part 11, first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 California Building Standards Code). The current version is the 2022 CalGreen Code, which took effect on January 1, 2023. The CalGreen Code sets design requirements equivalent to or more stringent than those of the California Energy Code for energy efficiency, water efficiency, waste diversion, and indoor air quality. These codes are adopted by local agencies that enforce building codes.

The 2025 CALGreen Code was adopted on September 11, 2024 and will go into effect on January 1, 2026. Relative to the 2022 CALGreen Code, the 2025 version proposes increased requirements for EV charging infrastructure (i.e., a higher percentage of parking spaces that must be equipped with EV chargers and more stringent requirements for the types of chargers that must be installed) in both residential and non-residential buildings. The 2025 CALGreen Code also includes required analysis of Embodied Carbon in Building Materials, which was not required under the 2022 CALGreen Code. Lastly, the 2025 CALGreen Code includes updates to energy efficiency standards aimed at further reducing energy consumption in buildings and promoting the use of renewable energy sources.

LOCAL

General Plans

Several of SACOG's member agencies have general plan elements and policies that specifically address energy use and conservation, as well as the reduction of GHG emissions and strategies to prepare for the effects of climate change. Such general plans contain goals, objectives, and policies aimed at reducing energy consumption and GHG emissions. These include policies on energy retrofits to existing residential and commercial land uses, zoning and building ordinances for energy efficiency of new construction, and ways to reduce VMT through land use and transportation priorities.

Local and Regional Greenhouse Gas Reduction Plans, Climate Action Plans, and Related Initiatives

Many of SACOG's member jurisdictions and partner agencies have climate action plans (CAPs), GHG reduction plans, and/or sustainability plans that set goals and targets on the reduction of GHG emissions, and outline policies to help achieve those goals. At the time of writing this Draft EIR, the cities of Sacramento, Elk Grove, West Sacramento, Citrus Heights, Davis, Rancho Cordova, Folsom, West Sacramento, Galt, Winters, and Woodland as well as the counties of Sacramento, Yolo, and Placer have adopted CAPs, GHG Reduction Plans, or Sustainability Plans.

Many of the completed CAPs in the area address similar issues related to emissions produced by transportation, energy usage, and operational emissions. The types and quantity of emissions produced in the SACOG region vary among county boundaries. For instance, Yolo and Sutter counties have a higher proportion of emissions produced by agricultural activities that are not observed in more urban or less cultivated counties. Considering this, Yolo and Sutter counties have established more policies for reducing emissions due to these activities.

For most jurisdictions, transportation and energy usage produce the majority of GHG emissions. Policies in CAPs in the region establish a needed framework for improved circulation networks and energy conservation. Transportation

policies aim to reduce VMT by offering more opportunities for alternative transportation modes, such as bicycling and transit use. In addition, many of the CAPs frame policies to promote transit-oriented development. Future residents in these developments will have close access to frequent local transit. Cities and counties also include programs to improve energy efficiencies in old and new buildings and decrease the use of fossil fuels by providing incentives for renewable energy sources.

Mayors' Climate Commission on Climate Change

The Mayors' Climate Commission on Climate Change is a joint initiative of the mayors of the cities of Sacramento and West Sacramento. The mayors have established the commission to develop a common vision and set of strategies for both cities to achieve carbon zero by 2045. In June of 2020 the Mayors' Commission on Climate Change unanimously adopted its final report for achieving carbon zero by 2045 in Sacramento and West Sacramento. The commission's recommendations define strategies to achieve the cities' carbon zero vision, including a set of equity strategies, foundational principles, and actions to reduce emissions in the built environment, mobility, and community health and resilience sectors.

Capital Region Climate Readiness Collaborative

The Capital Region Climate Readiness Collaborative is a regional coalition that provides a network designed to promote greater resilience coordination at the regional and local level across the six-county Sacramento region (El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties). The purpose of this collaborative is to help leaders from government, business, agriculture, academia, labor, and community groups come together – within and across market and jurisdictional boundaries – to share information and best practices, leverage efforts and resources, avoid duplication, identify critical needs and strategies, and develop funding strategies to meet those needs.

3.7.2 Environmental Setting

GREENHOUSE GASES

The Physical Scientific Basis of Greenhouse Gas Emissions and Climate Change

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the atmosphere from space. A portion of the radiation is absorbed by the earth's surface, and a smaller portion of this radiation is reflected toward space. The absorbed radiation is then emitted from the earth as low-frequency infrared radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on Earth.

Prominent GHGs contributing to the greenhouse effect are CO_2, methane, N_2O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are found to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. The likely range of human-induced warming in global-mean surface air temperature (GSAT) in 2010–2019 relative to 1850–1900 is 0.8°C–1.3°C, encompassing the observed warming of 0.9°C–1.2°C, while the change attributable to natural forcings is only −0.1°C to +0.1°C. It is very likely that human-induced GHG increases were the main driver of tropospheric warming since comprehensive satellite observations started in 1979, and virtually certain that human-induced GHG forcing is the primary driver of the observed changes in hot and cold extremes on the global scale (IPCC 2023).

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas most pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any GHG molecule depends on multiple variables and cannot be determined with any certainty, it is

understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO_2 emissions, approximately 56 percent are estimated to be sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 44 percent of human-caused CO_2 emissions remain stored in the atmosphere (IPCC 2023).

The quantity of GHGs in the atmosphere responsible for climate change is not precisely known, but it is considered to be enormous. No single project alone would measurably contribute to an incremental change in the global average temperature or to global or local climates or microclimates. From the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

Greenhouse Gas Emissions Sources and Sinks

Emissions of CO_2 are byproducts of fossil fuel combustion. Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices, landfills, and forest fires. N_2O is also largely attributable to agricultural practices and soil management. CO_2 sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution (CO_2 dissolving into the water) and are two of the most common processes for removing CO_2 from the atmosphere.

Effects of Climate Change on the Environment

The Intergovernmental Panel on Climate Change (IPCC) predicts that the global mean surface temperature increase by the end of the 21st century (2081–2100), relative to 1986–2005, could range from 0.5 to 8.7 degrees Fahrenheit. Additionally, IPCC projects that global mean sea level rise will continue during the 21st century, very likely at a faster rate than observed from 1901 to 2015. By 2100, the rise will likely range from 18 to 33 inches (0.48 to 0.84 meters) (IPCC 2019: 323-4).

According to IPCC, which was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, global average temperature will increase by 3.7 to 4.8 °C (6.7 to 8.6 degrees Fahrenheit [°F]) by the end of the century unless additional efforts to reduce GHG emissions are made (IPCC 2014:10). According to *California's Fourth Climate Change Assessment*, with global GHGs reduced at a moderate rate California will experience average daily high temperatures that are warmer than the historic average by 2.5 °F from 2006 to 2039, by 4.4°F from 2040 to 2069, and by 5.6°F from 2070 to 2100; and if GHG emissions continue at current rates then California will experience average daily high temperatures that are warmer than the historic average by 2.7°F from 2006 to 2039, by 5.8°F from 2040 to 2069, and by 8.8°F from 2070 to 2100 (OPR et al. 2018). Further discussion of the effects of climate change is provided in Chapter 5, "Other CEQA Sections," of this Draft EIR.

Greenhouse Gas Emission Sources

In 2022, statewide emitting activities accounted for 371.1 $MMTCO_2e$, which is 10.2 $MMTCO_2e$ lower than 2021 levels and 59.9 $MMTCO_2e$ below the 2020 GHG limit of 431 $MMTCO_2e$ (CARB 2024a). In 2014, statewide GHG emissions dropped below the 2020 GHG limit and have remained below the limit since that time. Overall trends in the *California Greenhouse Gas Emissions from 2000 to 2022: Trends of Emissions and Other Indicators* demonstrate that the CI of California's economy (the amount of carbon emissions per million dollars of gross state product [GSP]) is declining. From 2000 to 2022, the CI of California's economy decreased by 54.8 percent while the GSP increased by 77.5 percent. California's GSP increased 0.7 percent in 2022. Emissions per GSP declined by 3.1 percent from 2021 to 2022 (CARB 2024b). Overall trends in the AB 32 GHG Inventory also continue to demonstrate that the CI of California's economy is declining.

As discussed previously, GHG emissions are attributable in large part to human activities. Table 3.7-1 summarizes the statewide GHG inventory for California; transportation, industry, and electricity generation are the largest GHG emission sectors.

Table 3.7-1 Statewide GHG Emissions by Economic Sector (2022)

Sector	Percent
Transportation	39
Industrial	23
Electricity generation (in state)	11
Electricity generation (imports)	5
Agriculture	8
Residential	8
Commercial	6
Not specified	<1

Source: CARB 2024a.

Energy

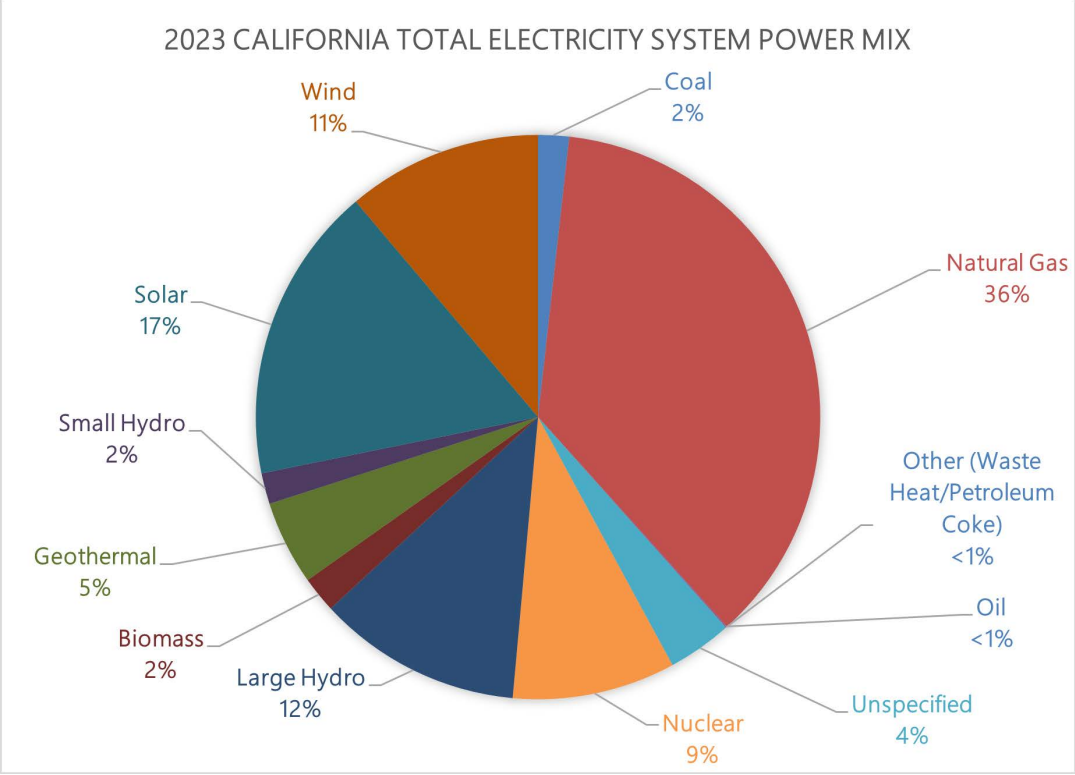
Energy Types

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. One-third of energy commodities consumed in California is natural gas.

In 2023, renewable resources, including hydroelectric power and small-scale solar power, supplied 54 percent of California's in-state electricity generation. Natural gas fueled another 39 percent, and nuclear power provided almost all the rest (EIA 2024a). The contribution of in- and out-of-state power plants depends on the precipitation that occurred in the previous year, the corresponding amount of available hydroelectric power, and other factors.

Energy Suppliers and Sources

Pacific Gas and Electric Company (PG&E), Sacramento Municipal Utility District (SMUD), Pioneer Community Energy, Valley Clean Energy, and Roseville Electric provide natural gas and electricity services to the plan area for the 2025 Blueprint.



Source: CEC 2024b

Figure 3.7-1 2023 California Total Electricity System Power Mix

Pacific Gas and Electric Company

PG&E is one of the largest combination natural gas and electric utilities in the US. The company, a subsidiary of PG&E Corporation, serves approximately 16 million people in 70,000 square miles of northern and central California. Within the plan area for the 2025 Blueprint, PG&E provides electric service to El Dorado, Sutter, Yolo, and Yuba counties, and large portions of Placer County west of the Tahoe Basin. PG&E also provides gas service to the entire Sacramento metropolitan area.

PG&E obtains its electricity from natural gas, fossil fuels, nuclear, and hydroelectric and eligible renewable resources under California law. In 2023, 100 percent of the electricity PG&E delivered to its customers came from GHG-free sources through carbon-free nuclear power (53 percent), large hydroelectric power (13 percent) and a combination of eligible renewable resources (34 percent) including solar, wind, and small hydroelectric power (PG&E 2024).

PG&E provides incentives for rooftop solar, solar water heating, fuel cells, wind, battery storage, advanced LED lighting, and other advanced technologies that help customers reduce their energy bills and their carbon footprint.

Sacramento Municipal Utility District

SMUD supplies electric service to Sacramento County and to a 5-square-mile area in the Dry Creek/West Placer area west of the City of Roseville in Placer County. SMUD is the sixth-largest publicly-owned utility in the US, in terms of the number of customers served. SMUD obtains its electricity from a variety of sources, including hydro-generation, natural gas fired generators, cogeneration plants, advanced and renewable technologies (such as wind, solar, and biomass and landfill gas power), and power purchased on the wholesale market.

A large portion of SMUD's generated power is produced by the Upper American River Project (UARP), a hydroelectric facility on the western slope of the Sierra Nevada. This project, consisting of 11 reservoirs and eight powerhouses, generates enough electricity to meet about 20 percent of SMUD's customer demand. In a normal water year, UARP provides roughly 1.8 billion kilowatt-hours (kwh) of electricity, which is enough to power 180,000 homes.

In 2023, 45 percent of the electricity SMUD delivered to its customers came from eligible renewable resources (i.e., biomass and biowaste, geothermal, eligible hydroelectric, solar, and wind), 32.6 percent from large hydroelectric, 21.9 percent from natural gas, 0.3 percent from nuclear, and 0.1 percent from unspecified power sources (i.e., electricity that has been purchased through open market transactions and is not traceable to a specific generation source) (CEC 2024c).

SMUD acquired an updated Federal Energy Regulatory Commission (FERC) operating license for the UARP in 2014, which will be effective through 2064. Under the conditions of the 2014 operating license, SMUD agreed to release more water from dams to support fish and whitewater boating, to carry out extensive ecological monitoring and reporting over the term of the operating license, and to improve public recreation facilities around reservoirs in the Crystal Basin Recreation Area (SMUD n.d.).

SMUD completed construction of the Solano 4 Wind project at the Solano County Wind Farm. The project included the replacement of then-existing wind turbines with up to 22 modernized turbines, which generate an estimated 92 megawatts (MW) of renewable energy for the electric grid. Project construction began in 2020 and was completed in May 2024, increasing the Wind Farm's total production to 207 MW (SMUD 2024). The facility began producing power following the completion of construction in 2024.

SMUD offers a variety of programs to preserve natural resources and reduce pollution, including incentives for purchasing and installing photo-voltaic solar panels and charging pricing plans for EVs. SMUD also offers rebates for energy-efficient appliances, energy-efficient heating and cooling systems, energy-efficient lighting, and for saving energy through the home performance program.

In July 2020, the SMUD Board of Directors adopted a climate emergency declaration committed to working toward an ambitious goal of delivering zero-carbon electricity by 2030. The 2030 Clean Energy Vision is SMUD's overarching goal to reach zero-carbon emissions in its power supply by 2030. The 2030 Zero Carbon Plan, adopted March 30, 2021, is the roadmap for SMUD to achieve the zero-carbon goal through 100 percent renewable generation by 2030, 15 years in advance of the State-mandated Renewables Portfolio Standard. SMUD released the recent 2030 Zero Carbon Plan Progress Report in September 2024.

SMUD's 2022 Integrated Resource Plan (IRP) details the utility's long-term plan to meet the area's energy demand reliably and cost-effectively, while also meeting the various regulatory requirements, including GHG reduction targets and renewable energy procurement requirements. SB 350 (De León, Chapter 547, Statutes of 2015), (Public Utilities Code [PUC] Section 9622) requires CEC to review the IRP of identified publicly owned utilities to ensure they meet various requirements specified in the law. In 2024, CEC staff reviewed the 2022 IRP, which included the 2030 Zero Carbon Plan discussed above, for consistency with the requirements of PUC Section 9621 and ultimately concluded that the 2022 IRP (CEC 2024d):

- meets the GHG emission reduction requirements of PUC Section 9621(b)(1) and the renewable energy procurement requirement of PUC Section 9621(b)(2),
- meets planning goals related to retail rates, reliability, transmission, and distribution systems as set forth in PUC Section 9621(b)(3),
- considered the role of existing renewable generation, grid operational efficiencies, energy storage, and two distributed resources (including energy efficiency) in helping to ensure the utility's energy and reliability needs in the hours that encompass the peak hour as set forth in PUC Section 9621(c), and
- addressed the procurement requirements for energy efficiency and demand response, energy storage, transportation electrification, portfolio diversification, and resource adequacy as set forth in PUC Section 9621(d).

Pioneer Community Energy

Pioneer Community Energy began in 2018 as a partnership between the County of Placer and the cities of Auburn, Colfax, Lincoln, Rocklin, and the Town of Loomis. Pioneer's service area includes most of Placer County, except for those covered by SMUD and Roseville Electric or the Tahoe Basin.

In 2023, 39.4 percent of the electricity Pioneer Community Energy delivered to its customers came from eligible renewable resources, 26.7 percent from nuclear, and 29.8 percent from unspecified power sources (CEC 2024e).

Valley Clean Energy

Valley Clean Energy is the locally governed electricity provider for unincorporated Yolo County as well as the cities of Davis and Woodland. Valley Clean Energy purchases power with higher renewable and lower GHG content. PG&E then delivers the electricity, maintaining the power lines, handling billing, and responding to service calls and emergencies (Valley Clean Energy 2023). For this reason, in 2023, 100 percent of energy provided by Valley Clean Energy was classified as being from unspecified power sources (i.e., electricity that has been purchased through open market transactions and is not traceable to a specific generation source) (CEC 2024f).

City of Roseville

The City of Roseville supplies its own electrical service to its residents through Roseville Electric, a municipal-owned utility. The City serves more than 53,000 residential and business customers. Roseville Electric offers rebates to customers for energy-efficient air conditioners, freezers, refrigerators, pool pumps, sun window screens, whole house fans, and solar energy systems. Customers can also receive credit on their bill for enrolling in the Power Partners program to cycle their central air conditioning compressor on and off during high energy demand times in the summer.

In 2023, 29 percent of the electricity Roseville Electric delivered to its customers came from eligible renewable resources, 33.1 percent from large hydroelectric, 29.7 percent from natural gas, 1.2 percent from nuclear, and 7 percent from unspecified power sources (CEC 2024g).

Roseville Electric generates power from the Roseville Energy Park, a 160-MW natural gas fire plant that generates enough energy to meet 40 percent of the city's needs. The remainder of Roseville's electricity is purchased. In 2019, Roseville Electric unveiled its first community solar project, which provides up to 200 customers with solar power from 3,000 panels.

Energy Demand and Use

In 2023, renewable resources, including hydroelectric power and small-scale solar power, supplied 54 percent of California's in-state electricity generation. Natural gas fueled another 39 percent and nuclear power provided almost

all the rest. In 2023, California was the fourth-largest electricity producer in the nation. It is also the nation's third-largest electricity consumer and imports more electricity than any other state.). On-road vehicle use comprises about 85 percent of the petroleum consumed in California (EIA 2024a).

Commercial and Residential Energy Use

Homes in the United States built between 2000 and 2005 used 14 percent less energy per square foot than homes built in the 1980s and 40 percent less energy per square foot than homes built before 1950. However, larger home sizes offset these efficiency improvements. Primary energy consumption in the residential sector totaled 9.5 quadrillion British thermal units (Btu) in 2020 (the latest year the US Energy Information Administration's (EIA's) *Residential Energy Consumption Survey* was completed) (EIA 2024). Energy consumption increased 4.4 percent from 2015 to 2020. (EIA 2024b)

Commercial buildings represent just under one-fifth of US energy consumption, with office space, retail space, and educational facilities representing about half of commercial sector energy consumption. The commercial sector accounted for 8 percent of total energy in the US in 2023. In comparison, the residential sector accounted for approximately 7 percent of US energy consumption (EIA 2024b).

Commercial and residential space heating (including on-site co-generation facilities at commercial buildings) comprises a large share of energy end use in the Sacramento region. Other major energy users include industrial facilities (including oil refineries that consume energy in the production of gasoline and other fuels) and electricity-generating power plants, which burn fossil fuels (generally natural gas) to convert those fuels to electricity.

Energy Use for Transportation

As noted in Section 3.7.1, "Regulatory Setting," several State mandates and efforts, such as SB 375 and SB 743, seek to reduce VMT. Despite the progress in reducing per capita VMT and per capita fuel consumption, the continued projected increases in total fuel consumption and VMT can be attributed to the overall forecasted increase in population. See Section 3.16, "Transportation," for more information on VMT and other travel-related data for the Sacramento Region.

Total gasoline use in California varies from year to year because of a variety of factors, such as gas prices, periods of economic growth and decline, and fuel economy of vehicles. Between January 2015 and December 2024, approximately 143 billion gallons of gasoline were purchased in California. During this period, the volume of gasoline purchased ranged from a minimum of approximately 710 million gallons in April 2020 due to the effects of COVID-19, to a maximum of approximately 1.51 billion gallons in July 2019 (California Department of Tax and Fee Administration 2025).

Long-term energy consumption trends for transportation are generally determined by fuel efficiency trends for motor vehicles, as motor vehicles are the predominant transportation mode for passengers and commercial goods.

Alternative Fuels

A variety of alternative fuels are used to reduce demand for petroleum-based fuel. The use of these fuels is encouraged through various statewide regulations and plans (e.g., LCFS, AB 32 Scoping Plan). Conventional gasoline and diesel may be replaced (depending on the capability of the vehicle) with many transportation fuels, including:

- biodiesel,
- electricity,
- ethanol (E-10 and E-85),
- hydrogen,
- natural gas (methane in the form of compressed and liquefied natural gas),
- propane,
- renewable diesel (including biomass-to-liquid),
- synthetic fuels, and
- gas-to-liquid and coal-to-liquid fuels.

California has a growing number of alternative fuel vehicles through the joint efforts of CEC, CARB, local air districts, federal government, transit agencies, utilities, and other public and private entities. As of May 2025, California contained over 54,000 alternative fueling stations (AFDC 2025).

3.7.3 Environmental Analysis

METHODOLOGY

GHG emissions were measured in metric tons (MT) of CO_2e, while energy consumption was measured in gallons of fuel; gigawatt hours (GWh) of electricity, and millions of British thermal units (MMBTU) of natural gas. Using existing and projected land use and transportation data, total annual GHG emissions and energy consumption were estimated to analyze the net change in operational GHG emissions between 2020 and 2050 for the entire region (including implementation of the 2025 Blueprint) based on standard development typical of the region. Operational GHG emissions were estimated for following sources: area sources, natural gas combustion, electricity consumption, passenger vehicles, agricultural operations, waste generation, and water consumption and wastewater generation.

The following analysis of project-related GHGs presents the impacts associated with buildout of the 2025 Blueprint (i.e., the totality of all future regional growth, land use change, and transportation network improvement projects under the 2025 Blueprint) and is essentially a cumulative analysis of the 2025 Blueprint, due to the inherently cumulative nature of GHG impacts. Further, the 2025 Blueprint was developed to support regional GHG emissions reductions in line with the reduction goals of SB 375 by targeting VMT reduction through a combined approach of increased infill and transit-oriented development as well as transportation infrastructure improvements. Therefore, any GHG reductions achieved through implementation of the 2025 Blueprint are a result of this combined approach where VMT reductions through increased development density near transit infrastructure is complemented by VMT reductions achieved through additions and upgrades to the regional transportation network. Thus, the GHG analysis below evaluates impacts based on the collective construction and operational emissions from all future regional growth, land use change, and transportation network improvement projects under the 2025 Blueprint.

Transportation Operations

VMT data is representative of travel on roadways across the plan area. Mobile emissions for each county were calculated based on VMT and emission factors from CARB's EMFAC2021 emissions inventory model and then consolidated to represent the total mobile emissions for the entire plan area. Annual emissions from the six counties in the plan area were generated by EMFAC for the years 2020 and 2050. The emission estimates incorporate road-based, trip-based, and evaporative emissions to derive a VMT-based emission factor. At the time of the analysis, trip information was not available. This composite factor accounts for emissions not directly proportional to miles traveled, providing a more comprehensive representation of on-road emissions.

Energy Production and Consumption

Energy consumption rates were derived from the values assumed in CalEEMod and applied on a regional scale based on existing and anticipated land uses for the forecast years. Electricity and natural gas usage data were calculated for the plan area using a combination of CalEEMod default data for electricity consumption by land use and use types and sizes derived from project-specific data. Notably, GHG intensity factors were zeroed for years 2045-2050 due to California's goal to achieve carbon neutrality by 2045 per AB 1279.

The 2025 Blueprint area has two electricity supply zones that are used for modeling: SMUD and Central Valley (CV). Residential land uses were modeled in both the SMUD and CV electric supply zones to compare GHG emissions for the project buildout year of 2050 from these two regions. As operation in the CV electricity supply zone was shown to result in greater emissions of GHGs in the buildout year compared to those from operation in SMUD region, the CV electricity supply zone was used in subsequent modeling to provide a conservative analysis of emissions from operational electricity (see Appendix B).

THRESHOLDS OF SIGNIFICANCE

For the purposes of this Draft EIR, the 2025 Blueprint would result in significant related to GHG emissions or energy use if it would:

- Conflict with the SACOG region's achievement of SB 375 GHG emissions reduction targets;
- Be inconsistent with the State's ability to achieve the 2030 reduction target of SB 32 and carbon neutrality by 2045, consistent with AB 1279;
- Substantially interfere with achievement of applicable local GHG reduction plan goals or conflict with or obstruct a plan for renewable energy or energy efficiency; Increase GHG emissions from project construction activities in a manner inconsistent with achievement of the state's climate goals; or
- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

ISSUES NOT DISCUSSED FURTHER

All issues related to GHG emissions and energy are discussed below.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.7-1: Conflict with the SB 375 GHG Emissions Reduction Targets

Regional Growth and Land Use Change/Transportation Network Improvements and Programs

Pursuant to SB 375, CARB has established regional on-road GHG per capita emissions reduction targets for light-duty trucks and passenger vehicles. This section describes the regional impact from the projected land use pattern, planned transportation improvements, and other transportation strategies in the 2025 Blueprint as they relate to SB 375 and the regional targets.

Achievement of the 2035 target in SB 375 is an objective of the 2025 Blueprint. The proposed regional growth pattern in the 2025 Blueprint, as described in Chapter 2, "Project Description," provides a mix of housing options, located closer to jobs and transit. In addition, the proposed transportation projects include expansion of existing rail and bus service, increased headways to reduce wait time between transit service, increased bicycle and pedestrian improvements, and targeted roadway and highway improvement and expansion.

Section 3.16, "Transportation," includes an analysis of the relationship between land use and travel behavior, which describes the land use through a set of measures that impact the amount and type of travel in a region. These measures include regional accessibility, street patterns, mix of use, distance to nearest transit, and residential density. Through the 2025 Blueprint, SACOG has leveraged key land use/transportation relationships in the preparation of the Development Pattern and the transportation projects and improvements in the plan area. The benefits measured by these metrics not only reduce per capita VMT, but also increase walk and bike trips, as well as transit ridership.

SB 375 requires an SCS to reduce GHG emissions from cars and light trucks in alignment with GHG targets that are set by CARB, expressed as a percent change in per capita passenger vehicle GHG emissions. For the SACOG region, the target set by CARB is 19 percent below 2005 levels by 2035. The 2005 GHG per capita emissions were modeled for the plan area to be 23.2 pounds per day. The 2035 emissions levels were modeled to be 18.4 pounds per day. The reported CO_2 emissions directly correlate to passenger vehicle and light truck VMT from SACSIM23 with emissions generated from EMFAC11, which does not include adjustment factor between EMFAC11 and EMFAC07 nor the additional emission reductions from off-model reduction strategies. Once combined for SB 375 calculation, a 19 percent reduction from 2005 by 2035 is achieved. Table 3.7.2 below shows these reductions. SB 375 GHG reduction factors are subject to CARB review and approval. In addition, the 2035 emission level modeled is subject to CARB approval under SB 375. It is worth noting, the SACOG 2035 target was set conditionally to 19 percent based on a pilot test proposed by SACOG staff of an enhanced SCS that recognizes the conditions of the Sacramento region. If SACOG is not able to secure the funding and commitments to implement the proposed pilot project, CARB staff would evaluate the SCS performance against an 18 percent target.

Table 3.7-2 SB 375 Greenhouse Gas Emissions Reduction

Performance Metric	2005	2035	Percent Reduction from 2005
Weekday passenger vehicle CO2 emissions, lbs. per person per day	23.2	18.4	> 19%

CO_2 emission reported is passenger vehicle and light truck VMT from SACSIM23 with emissions directly generated from EMFAC11. This does not include adjustment factor between EMFAC11 and EMFAC07, it also does not include additional reduction from off model GHG strategies. SB 375 GHG reduction factors subject to California Air Resource Staff review and approval.

Source: prepared by SACOG in 2025

These projections do not include any additional measures from the 2022 Scoping Plan (e.g., programs to improve the efficiency of the vehicle fleet, or to reduce the reliance on carbon-based fuels), based on guidance on the SB 375 target provided by CARB (CARB 2018). The SB 375 target is intended to capture reductions in GHG emissions generated by reductions in travel and operational efficiencies on roadways. Implementation of the state regulations such as ACC II, LCFS, and ACT will reduce levels even further. Table 3.7-3 outlines the plan factors that contribute to the GHG reduction. For the factors related to the policies and programs of the 2025 Blueprint, the approach to estimating the approximate share of the GHG reduction are described below.

- For increased non-single-occupancy vehicle mode share, the trip length and increase in trip rate for transit, bike, and walk trips was calculated for the years 2005 and 2035 and the increase in person miles traveled by these modes was used to calculate the share for modeled travel. An off-model increment for transportation demand management programs, and a small share for increased micro-mobility use, was added to the increase in person miles to determine the total change in non-single-occupancy vehicle mode share.
- For shortened vehicle trips, the average trip length for all auto mode trips (single-occupancy vehicle and carpool) and the decrease in average trip length was used to calculate a share of GHG reduction.
- For facility pricing and mileage-based fees, the additional cost of auto travel for both programs was calculated as an average related to a non-priced alternative, and the increment was translated into a VMT impact using a VMT elasticity.
- For intelligent transportation systems and transportation system management, the impact of more robust deployment of these programs was calculated relative to 2005.
- The influence of local EV deployment programs, which are locally funded programs to increase the rate of EV market penetration within the SACOG region, was qualitatively assessed and translated into percentage change in GHG over-and-above the much larger state programs.

The SB 375 GHG emission reductions also include factors that the plan has less control over, including:

- Aging population—The share of persons 65-years-or-older is forecasted to increase from 16 percent today to 19 percent by 2050. Older persons typically travel less, and generate less VMT and GHG emissions from that travel, than younger persons.
- Increase in auto cost—The basic cost of operating an automobile is forecasted to increase over the timeline. This increase is based on the forecasted cost of fuel, changes to the efficiency of the passenger vehicle fleet, and changes to the non-fuel operating costs (like tires, and maintenance and repair), averaged to a per-mile cost. This part of the vehicle cost excludes "policy" costs like facility-based or mileage-based pricing fees.
- Increase in Telework—- Since the COVID-19 pandemic, telework has increased as and become a more common way to work. Some telework schedules, such as hybrid schedules, increase VMT;, however, cumulatively, an increase in telework increase in the work place correlates with a decrease in overall VMT as well as alleviation of peak congestion times which overall decreases VMT. The number of workers telecommuting has decreased since 2020 but recent data shows a stabilization of teleworkers.

During the SB 375 target setting in 2010, exogenous factors were part of the calculation of this target, and as well as the re-set by CARB in 2018 and, thus, these factors are included as part of the SB 375 GHG reduction breakdown in Table 3.7-3.

Table 3.7-3 SB 375 Greenhouse Gas Emissions Reduction

2025 Blueprint Policy & Program – Related Factors	Approx. Reduction
Increase in Transit, Bike & Walk Trip Share	5%
Shortened Vehicle Trips and Increase in Carpooling	5%
Pricing	1.5%
Intelligent Transportation Systems and Transportation System Management	+/- 0.5%
Local EV Programs	+/- 0.5%
Exogenous Factors	
Aging Population	1%
Increase in Auto Cost	2.5%
Increase in Telework	3%
Total Reduction	**+/-19%**

Note: SB 375 GHG reduction factors subject to CARB review and approval.

Source: prepared by SACOG in 2025.

As described in Chapter 2 of this Draft EIR, the combination of the land use and transportation projects, along with expansion of existing programs that reduce GHG such as bike- and scooter-share, transportation demand management programs, car sharing, and local electric vehicle infrastructure and incentives would put the region in a position to achieve the per capita GHG reduction target. CARB must ultimately review and approve SACOG's GHG calculation methodology and confirm that the GHG reduction strategies would achieve the GHG reductions. If the SCS does not achieve the GHG emission targets set by CARB, an alternative planning strategy (APS) must be prepared to demonstrate how the targets could be achieved. SACOG would implement the 2025 Blueprint in a manner that is consistent with the SCS process, including the preparation of an APS, if required by CARB. Therefore, the 2025 Blueprint would not conflict with the SB 375 emissions reduction targets. Either CARB would ultimately confirm that the 2025 Blueprint meets the SB 375 reduction requirements or SACOG would be required to demonstrate through an APS that the 2025 Blueprint is on track to achieve the SB 375 GHG emissions reduction target. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.7-2: Be Inconsistent with the State's Ability to Achieve the 2030 Reduction Target of SB 32 and Carbon Neutrality by 2045, Consistent with AB 1279

Regional Growth and Land Use Change/Transportation Network Improvements and Programs

Construction-related GHG impacts are addressed qualitatively under Impact 3.7-4, below. Construction activities related to the implementation of the proposed land use pattern and transportation network improvements under the 2025 Blueprint would result in GHG emissions. Emissions would result from the generation of electricity used during construction as well as the combustion of fossil fuels sources used for heavy equipment, worker commutes, and materials hauling. Due to the regional scale of the 2025 Blueprint and the programmatic level of this analysis, specific construction-related details (e.g., location, schedule, equipment) for individual land use development projects are not available. Thus, the quantity of construction-related GHG emissions is speculative.

Implementation of the proposed land use pattern and transportation infrastructure improvements under the 2025 Blueprint would result in long-term operational emissions of GHGs associated with the combustion of fossil fuels for

transportation, operation of landscape maintenance equipment, energy-source emissions from the generation and utilization of electricity and natural gas, water-related energy consumption associated with water use and the conveyance and treatment of wastewater, and waste-generated emissions from the transport and disposal of solid waste. Long-term operational emissions are a function of project-level design. Whether or not individual projects would result in significant levels of GHG emissions would depend on various parameters (e.g., project size, location, design, energy efficiency) that are not known at this time and therefore cannot be quantified on an individual basis.

In addition to area, energy, transportation, water, and waste emissions, the land uses in the 2025 Blueprint could also accommodate stationary sources of pollutants that would be required to obtain permits to operate in compliance with local air district rules. These sources could include, but are not limited to, the following: diesel engine or gas turbine generators for emergency power generation; central heating boilers for commercial, industrial, or large residential buildings; process equipment for light industrial uses; kitchen equipment at restaurants and schools; service station equipment; and dry-cleaning equipment. The permit process would ensure that these sources would be equipped with the required emission controls, and that individually these sources would not produce substantial emissions.

With respect to stationary source emissions, levels can vary greatly depending on the exact operations and processes involved. Specific information is not available for this program level analysis to reliably estimate these emissions. Nonetheless, the emissions from these sources would be additive to the estimated emissions described above.

GHG emissions associated with regional changes in emissions from 2020 to 2050, including implementation of the entire land use pattern of the 2025 Blueprint, have been estimated for informational purposes. (see Table 3.7-4). These calculations of operational GHG emissions, as described below, represent a general assumption of the net increase in emissions that could result from all of the growth accommodated by the 2025 Blueprint.

Specifically, the 2050 (with implementation of the 2025 Blueprint) scenario is modeled using modeling defaults that reflect the typical per unit energy use of the 278,000 dwelling units added under the plan. Mobile source emissions reflect the VMT modeled under the plan.

Table 3.7-4 Net Change in Operational GHG emissions in the Plan Area between 2020 and 2050

Emissions Sector	$MTCO_2e$/year
2020	
Mobile	10,513,736
Area	718,228
Energy	5,103,008
Water Consumption and Wastewater Treatment	195,140
Solid Waste Generation	640,132
Refrigerants	1,458,289
Total	18,628,534
2050 (2025 Blueprint Horizon Year)	
Mobile	7,807,327
Area	873,471
Energy	3,509,231
Water Consumption and Wastewater Treatment	172,256
Solid Waste Generation	683,433
Refrigerants	1,185,034
Total	14,230,751
Difference in total emissions between 2020 and 2025 Blueprint's 2050 horizon year	-4,397,783

Notes: $MTCO_2e$ = metric tons of carbon dioxide equivalent. Totals may not sum due to rounding.

Source: Modeling utilizing California Emissions Estimator Model and EMFAC2021 performed by Ascent in 2025.

As shown in Table 3.7-4, regional growth and transportation projects planned for in the 2025 Blueprint would result in increased annual GHG emissions relative to 2020 from the solid waste and area sectors, while all other sectors would see a decrease in annual GHG emissions relative to 2020. Total annual emissions would be reduced by approximately 3,649,674 $MTCO_2e$/year in 2050 relative to 2020. Notably, GHG emissions reductions would occur even in a "no-project" scenario where the 2025 Blueprint is not implemented, as State and local regulations regarding GHG reductions across all sectors have created a statewide downward trend in GHG emissions in accordance with the reduction goals of SB 32 and AB 1279. The 2025 Blueprint would support statewide GHG emissions reduction goals through dense, compact development that, coupled with an efficient and diversified transportation network, would improve transportation efficiency and reduce overall and per capita GHG emissions.

It is important to note that as the 2025 Blueprint is implemented, project-level analyses of GHG would be required as appropriate by the CEQA lead agency. Because of the programmatic nature of the 2025 Blueprint, individual land uses and associated emissions may be different than what was projected at the plan level due to unknowns regarding the specific land use type and size of individual land use development and transportation infrastructure improvement projects under the 2025 Blueprint.

The 2025 Blueprint is specifically designed to reduce regional VMT and, because the 2022 Scoping Plan directs local agencies to take action to reduce VMT and therefore contribute to achieving statewide GHG reduction targets, the 2022 Scoping Plan is a GHG reduction plan applicable to the project. The 2022 Scoping Plan outlines the primary strategies California intends to implement to achieve the legislated GHG emission target for 2030 and substantially advance toward the State's 2050 climate goals. The 2022 Scoping Plan identifies the reductions needed by each GHG emission sector including transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste. The 2022 Scoping Plan lays out the pathway to achieve the state's carbon neutrality goal and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045.

The Local Actions Appendix (Appendix D) to the 2022 Scoping Plan includes various recommendations that local governments can implement to align their planning and development review processes with the State's climate goals. Appendix D recommends that local governments focus on transportation electrification, VMT reduction, and building decarbonization (CARB 2022b). As detailed above, the 2025 Blueprint was specifically designed to reduce regional VMT and was prepared pursuant to SB 375. SB 375 seeks to reduce GHG emissions from the passenger-vehicle sector by reducing VMT within developed areas and areas planned for development within the jurisdictions of the state's 18 MPOs. Compliance with the reduction goals of SB 375 is identified in the 2022 Scoping Plan as a necessary component to achieving the short-term goal of reducing statewide GHG emissions to 40 percent below 1990 levels by 2030 as mandated by SB 32.

In a staff report issued February 2018 entitled *Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets*, CARB identifies the SACOG region's conditional target for GHG emissions reductions as a 19 percent decrease in per-capita passenger-vehicle GHG emissions as compared to 2005 levels by 2035 (CARB 2018). This reduction target adds to the GHG reductions achieved through the implementation of other statewide programs (e.g., Cap-and-Trade, RPS).

While the 2025 Blueprint aligns with the region's SB 375 target (see Impact 3.7-1, above), recent reports on the state's climate goals suggest that the regional 2035 GHG emissions reduction targets under SB 375 are not adequate to fully meet the GHG reduction goals of SB 32 (CARB 2022c). Collectively, CARB determined that if the state's 18 MPOs all met the SB 375 GHG emission reduction targets set by CARB in 2018, a 19 percent reduction in per-capita VMT would be achieved by 2035. In the target re-setting report, CARB expressed that to meet the statewide reduction goals set forth by SB 32, the state would need to reduce per-capita GHG emissions by 25 percent by 2035, resulting in a 6 percent gap between the 19 percent emissions reductions targets set for the regions (averaged for the 18 MPOs and compared to a baseline year of 2005). Thus, despite SACOG meeting its legislatively mandated SB 375 GHG emissions reduction targets (i.e., a 19 percent reduction from a 2005 inventory by 2035), a 6 percent gap compared to the state's 25 percent reduction need would remain. SACOG currently implements all available, feasible methods to achieve the 19 percent emissions reduction target mandated by SB 375, and additional reductions are neither feasible nor required (per the currently mandated reductions requirements) at this time. However, CARB is required to update

the reduction targets under SB 375 every 8 years and is already conducting workshops to solicit opinions from stakeholders for the next target update planned for 2026. It is foreseeable that SACOG's 2035 target could be adjusted during this process to be more stringent to account for this gap identified by CARB, in which case SACOG would be required to develop further reduction strategies using all feasible methods available at that time.

In the *2022 Progress Report California's Sustainable Communities and Climate Protection Act*, CARB states that an RTP/SCS that meets the applicable SB 375 targets alone will not result in the GHG emissions reductions necessary to meet state climate goals in 2030 nor in 2050 (CARB 2022c). CARB has also noted that greater reductions in VMT will be required to make up the 6 percent gap in GHG. Further, CARB states that California is still not reducing GHG emissions from personal vehicle travel as needed to meet climate commitments and as targeted under SB 375 (CARB 2022c). It will take collaboration among all these levels of government to identify the additional VMT reductions needed to achieve the state's climate goals because the MPOs do not have the land use authority or resources to meet challenge alone.

Another pathway to close the gap between GHG reductions achieved through SCS implementation and the GHG reductions necessary to meet the state's GHG reduction goals could be through application of a 15 percent VMT reduction on a project-by-project basis as recommended by OPR (OPR 2020). As GHG reductions from the transportation sector become more difficult to achieve, it is also possible that Cap-and-Trade could be a viable method of capturing transportation emissions and reducing them through market-based carbon trading. Such an expansion of that program is speculative at the time of writing this Draft EIR, however.

Given the state's emphasis on VMT reduction as the only feasible way to achieve additional GHG reductions needed, and in recognition of the climate change benefits that occur from reduced VMT resulting in reductions in GHGs, the projected land use pattern proposed under the 2025 Blueprint supports high density, transit-oriented development throughout the plan area. Further, SACOG utilizes existing relationships with other agencies such as SMAQMD, SMUD, and Sacramento Regional Transit District (SacRT) to promote adoption of ZEVs. The 2025 Blueprint includes policy NextGen-3**,** which involves supporting the transition to zero-emission passenger, freight, and transit vehicles in a manner that is equitable and considers the diversity of regional needs and contexts including rural, urban, and suburban communities as well as historically underrepresented communities. This policy would be achieved through continued partnership with the agencies listed above to build on the regional Zero Emission Vehicle Reduction Strategy. Despite this, SACOG lacks the land use authority to enforce the 2025 Blueprint throughout the region. Implementation of the projected land use pattern under the 2025 Blueprint is within the purview of the implementing agencies overseeing land use development within the plan area.

Collectively, SACOG funding programs have supported projects that reduce VMT and GHG emissions by building transportation infrastructure or campaigns/programs to incentivize infill development, connecting people to community destinations with walking and biking facilities, reducing transportation-related emissions, and exploring new options to decrease VMT. Through competitive distribution, SACOG is able to advance the projects and programs that best implement the 2025 Blueprint.

Nonetheless, given the evidence put forth by CARB and in the documents prepared by CARB related to the SB 375 target resetting finalized in March 2018, more must be done to reduce emissions from the transportation sector to achieve the state's climate goals. Therefore, compliance with the reduction goals set forth by SB 375 is not sufficient to achieve the State's near-term GHG reduction goals outlined in the 2022 Scoping Plan (i.e., 40 percent below 1990 emissions by 2030 [SB 32] and Statewide carbon neutrality by 2045 [AB 1279]). Thus, this impact would be **significant**.

Mitigation Measures

SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following measures or other comparable measures identified by the lead agency at a project-level would reduce impacts related conflict with GHG emissions targets and agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081).

Implement Mitigation Measure 3.16-1: Implement VMT Reduction Strategies

Mitigation Measure 3.7-1: Coordinate with and Support Local Agencies within the Plan Area to Reduce Regional GHGs from All Sectors

SACOG, in partnership with air districts within the plan area, shall work with the counties and cities within the plan area to adopt qualified GHG reduction plans (e.g., CAPs), develop GHG-reducing planning policies, and implement local climate initiatives, with the ultimate completion date to be achieved by the MTP/SCS's horizon year. These reductions can be achieved through a combination of programs, including zero net energy in new construction, retrofits of existing buildings, incentivizing the development of renewable energy sources that serve both new and existing land uses, and other measures. Notably, the development and implementation of GHG reduction plans would ultimately occur at the discretion of local agencies, counties, and municipalities. Nevertheless, SACOG shall contribute relevant data and protocols to assist in the development of inventories, forecasts, and GHG reduction strategies.

Significance after Mitigation

Mitigation Measure 3.16-1 has the potential to assist SACOG in achieving higher VMT reductions through new or expanded technologies, methods, measures, and programs; however, the efficacy or feasibility of such technologies, methods, measures, and programs are unknown at this time and beyond the scope of SACOG's authority to control. As a result, while it is possible that such technologies, methods, measures, and programs could reduce emissions as necessary to achieve the state's long-term climate change goals, reaching a conclusion to that effect would be speculative.

Mitigation Measure 3.7-1 would further reduce VMT emissions in addition to reductions from other sectors (i.e., energy, area, water, and waste). SACOG's support of local climate change would be consistent with guidance in the 2022 Scoping Plan, which indicates that local and regional GHG reduction efforts are necessary for the state to meet its long-term climate change goals. However, there is no assurance that local jurisdictions would implement the necessary measures to reduce the 2025 Blueprint's fair share GHG inventory to levels consistent with statewide reduction targets. Additionally, SACOG cannot require local implementing agencies to adopt GHG reduction plans or policies.

While Mitigation Measures 3.16-1 and 3.7-1 would reduce GHG emissions throughout the plan area of the 2025 Blueprint, the actual reductions achieved are uncertain at this time. If the implementing agency adopts these mitigation measures, Impact 3.7-2 may be reduced, but not to a less-than-significant level. For projects proposing to streamline environmental review, lead agencies must comply with state guidance on VMT reduction and conduct project-level analysis for each project to analyze whether, based on substantial evidence in the record, the proposed mitigation would reduce the VMT impact to less than significant. However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, Impact 3.7-2 is **significant and unavoidable**.

Impact 3.7-3: Substantially Interfere with Achievement of Applicable Local GHG Reduction Plan Goals or Conflict with or Obstruct a Plan for Renewable Energy or Energy Efficiency

Regional Growth and Land Use Change/Transportation Network Improvements and Programs

As discussed in Chapter 2, "Project Description," the 2025 Blueprint's land use policies are directed at reducing VMT through construction of compact and mixed-use development in areas that offer transportation choices such as walking, biking, and transit. Future land development and transportation projects under the 2025 Blueprint would also be subject to the GHG reduction and energy conservation and efficiency policies of local CAPs. As stated in Section 3.7.1, "Regulatory Setting," at the time of writing this Draft EIR, the cities of Sacramento, Elk Grove, West Sacramento, Citrus Heights, Davis, Rancho Cordova, Folsom, West Sacramento, Galt, Winters, and Woodland as well as the counties of Sacramento, Yolo, and Placer have adopted CAPs, GHG Reduction Plans, or Sustainability Plans. In addition, member jurisdictions within the plan area of the 2025 Blueprint have begun the CAP process by conducting baseline emissions inventories, which establish a reference point for GHG emissions reductions. The two CAPs most recently adopted in the plan area are the *County of Sacramento Climate Action Plan for the Unincorporated*

Sacramento County and County Operations (Sacramento County CAP), adopted in October 2024, and the *City of Elk Grove Climate Action Plan: 2019 Update* (Elk Grove CAP), most recently amended in December 2024. As the most recently adopted CAPs in the SACOG region, these represent the most current plans developed to meet the State's short-term and long-term GHG reduction targets codified in AB 32 and AB 1279, respectively, and outlined in the 2022 Scoping Plan.

The Sacramento County CAP and Elk Grove CAP include various measures to reduce VMT and associated emissions from motor vehicles by encouraging active transportation, reducing congestion, increasing transit ridership, and encouraging adoption of zero emission vehicles. The 2025 Blueprint is specifically designed to reduce regional VMT and identifies transportation investments for infrastructure including highways, public transportation, bicycle facilities, and pedestrian facilities. Infrastructure additions and improvements under the 2025 Blueprint would include adding new shared-use paths, sidewalks, walkways, bike lanes, and complete streets, and improving existing ones. These investments would help to reduce fossil fuel consumption and associated GHG emissions by advancing the region's climate resiliency, reimagining long-term maintenance challenges improving multimodal accessibility, and public safety. Additionally, the 2025 Blueprint defines the policies, plans, and programs for the coordination and programming of transportation improvements throughout the SACOG planning area. These investments would result in beneficial contributions to localized GHG emissions reductions and energy efficiency improvements identified in the Sacramento County CAP and Elk Grove CAP.

The Sacramento County CAP and Elk Grove CAP also include various policies and measures intended to reduce GHG emissions from the building, waste, water, and energy generation sectors. For example, the Sacramento County and Elk Grove CAPs direct future development to become fully electric. The land use pattern identified in the 2025 Blueprint does not include policies or direction to use natural gas; therefore, the 2025 Blueprint would not obstruct the County of Sacramento or the City of Elk Grove from implementing this policy. Because the 2025 Blueprint targets emissions reductions in the transportation sector through infrastructure improvements and land use policies directed at reducing automobile use through construction of compact and mixed-use development, the 2025 Blueprint would not interfere with the implementation of CAP policies meant to reduce GHG emissions or promote energy efficiency and renewable energy in other sectors.

Notably, not all local GHG reduction plans will have identical GHG reduction goals and implementation measures. Entities in the SACOG region are in different stages of the CAP or GHG reduction planning process. As emissions inventories and climate action or GHG reduction plans are prepared and near completion or adoption, jurisdictions would set benchmarks to evaluate the implementation of their plan.

The 2025 Blueprint relies on the benefits of dense, compact development coupled with an efficient and diversified transportation network. It seeks to reduce overall and per capita energy consumption and related GHG emissions from all sources. These actions would help to reduce GHG emissions associated with changes in land use and transportation systems at both the local and regional level and, thus, could result in beneficial contributions to localized GHG emissions reductions identified in local plans. Therefore, the projected land use pattern and planned transportation improvements in the 2025 Blueprint at the regional level do not conflict with the applicable local GHG reduction plans. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.7-4: Increase GHG Emissions from Project Construction Activities Resulting from the 2025 Blueprint in a Manner Inconsistent with Achievement of the State's Climate Goals

Regional Growth and Land Use Change

Due to the regional scale of the 2025 Blueprint and the programmatic level of this analysis, specific construction-related details (e.g., location, schedule, equipment) for individual land use development projects are not available. Thus, the quantity of construction-related GHG emissions are speculative. However, a qualitative analysis is provided

below because construction of future projects within the plan area would generate GHG emissions primarily due to the operation of construction equipment and truck trips during buildout of the 2025 Blueprint growth pattern.

Implementation of the 2025 Blueprint land use growth pattern would result in the construction of new developments that could result in GHG-related impacts from construction activities such as grading, paving, clearing, landscaping, staging, excavation, earthmoving, and other related activities. As stated above, these activities would result in GHG emissions from the use of construction equipment such as dozers, loaders, excavators, forklifts, cranes, backhoes, and paving equipment, as well as haul trips and employee commute trips.

Quantification of short-term construction-related GHG emissions is generally based on a combination of methods, including the use of exhaust emission rates from emissions models, such as OFFROAD 2021 and EMFAC 2021, often used in conjunction with CalEEMod for assumptions regarding estimated equipment types and numbers per construction phase, construction phase timelines, hauling and worker trips, and energy demands (e.g., fuel and electricity). However, due to the regional scale of the 2025 Blueprint and the programmatic level of this analysis, specific construction-related details (e.g., location, schedule, equipment) for individual land use development projects are not available. Thus, the precise quantity of emissions would need to be determined at the time of the proposed construction of a given land use development project.

For projects located within the jurisdiction of an air district or implementing agency that does not recommend construction emissions be quantified, construction-related GHG emissions may not be considered significant. Air districts within the plan area of the 2025 Blueprint, such as SMAQMD, recommend screening land use projects by size to determine if construction emissions would exceed a 1,100 $MTCO_2e$/year threshold, and quantifying construction emissions and applying best management practice (BMPs) to the project if the screening criteria is exceeded. Given the variation in how air districts and implementing agencies analyze and address construction-related GHG emissions and impacts, construction of the projected land use pattern and planned transportation improvements under the 2025 Blueprint could be inconsistent with the state's long-term climate change targets as framed in the 2022 Scoping Plan. Thus, there remains the potential for the projected land use patterns under the 2025 Blueprint to result in construction-related GHG emissions levels that would exceed local air districts' thresholds.

Transportation Network Improvements and Programs

Construction activities that would result from proposed transportation network improvements under the 2025 Blueprint would generate GHG emissions related to the use of construction equipment, haul truck trips, and employee commutes. The quantity of emissions generated by construction equipment utilized to build transportation improvements proposed under the 2025 Blueprint would depend on the types and quantity of equipment used and the hours of operation. Intersection improvements such as signalization, re-striping, or signal coordination are not expected to generate significant short-term emissions impacts as these activities are often completed quickly and with small crews using relatively few pieces of equipment. However, other transportation improvement projects may involve more emissions-intense construction activities such as grading, paving, and excavation. The precise quantity of emissions would need to be determined at the time of the proposed construction of a given transportation improvement. At this level of analysis, specific project details such as construction phasing and duration, equipment type, crew sizes, and equipment usage hours cannot be reliably estimated. Thus, it is assumed that, due to the wide range of potential transportation network improvement projects considered under the 2025 Blueprint, some projects may result in exceedances of local air district's thresholds for GHG emissions.

Summary

Specific project details such as construction phasing and duration, equipment type, crew sizes, and equipment usage are necessary to quantify construction emissions. This data is not available for the development that would occur under the plan. Moreover, the various air districts with jurisdiction over construction emissions in the plan area have different approaches to managing emissions and consistency with local air district regulations may not ensure reduction of emissions in alignment with the state's climate goals. Thus, some projects may result in exceedances of local air district's thresholds for GHG emissions. This impact would be **significant.**

Mitigation Measures

SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following measures or other comparable measures identified by the lead agency at a project-level would reduce impacts related to construction-generated GHG emissions and agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081).

Implement Mitigation Measure 3.7-1: Coordinate with and Support Local Agencies within the Plan Area to Reduce Regional GHGs from All Sectors

Mitigation Measure 3.7-2: Implement All Feasible On- and Off-Site Mitigation Measures to Reduce GHG Emissions Below a Lead Agency–Approved Threshold of Significance

The applicable lead agency can and should implement, where necessary and feasible to address site-specific construction climate change impacts, the following measures to reduce construction GHG emissions below applicable air district thresholds, where they exist:

- Project proponents shall require its contractors to restrict the idling of on- and off-road diesel equipment to no more than 5 minutes while the equipment is on-site in compliance with California's Regulation for In-Use-Offroad Diesel Fueled Fleets.
- Project proponents of new facilities shall implement waste, disposal, and recycling strategies (i.e., 10 percent recycled content for Tier 1 and 15 percent recycled content for Tier 2) in accordance with the voluntary measures for non-residential land uses contained in Section A5.405.4 of the 2022 CALGreen Code or in accordance with any update to these requirements in future iterations of the CALGreen Code in place at the time of project construction.
- Project proponents of new facilities shall achieve or exceed the enhanced Tier 2 target for nonresidential land uses of recycling or reusing 80 percent of the construction waste as described in Section A5.408 of the 2022 CALGreen Code or in accordance with any update to these requirements in future iterations of the CALGreen Code in place at the time of project construction.
- Project proponents shall require that all diesel-powered, off-road construction equipment meet EPA's Tier 3 or Tier 4 emissions standards as defined in 40 CFR 1039 and comply with the exhaust emission test procedures and provisions of 40 CFR Parts 1065 and 1068. This measure can also be achieved by using battery-electric off-road equipment as it becomes available.
- Project proponents shall implement a program that incentivizes construction workers to carpool, and/or use public transit or electric vehicles to commute to and from the project site.

Significance after Mitigation

Mitigation Measure 3.7-2 would serve to mitigate the amount of GHGs emitted during construction phasing of the projected land use pattern and transportation network improvements under the 2025 Blueprint. While it is possible that such measures could reduce GHG impacts such that construction emissions would not exceed local air districts' thresholds, SACOG cannot require or enforce construction mitigation for projects outside of its purview. If the implementing agency adopts these mitigation measures, construction-related impacts under Impact 3.7-4 may be reduced, but not to a less-than-significant level. For projects proposing to streamline environmental review, lead agencies must conduct project-level analysis for each project to analyze whether, based on substantial evidence in the record, the proposed mitigation would reduce the construction-related impact to less than significant. However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, construction-related impacts under Impact 3.7-4 are **significant and unavoidable**.

Impact 3.7-5: Result in Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources

Regional Growth and Land use Changes/Transportation Network Improvements and Programs

Construction

Construction related to regional growth and land use changes as well as proposed transportation network improvements under the 2025 Blueprint would require the use of energy-consuming equipment such as dozers, loaders, excavators, forklifts, cranes, backhoes, and paving equipment, as well as haul trucks and employee passenger vehicles. Construction of new land use developments would consume energy during activities such as grading, paving, clearing, landscaping, staging, excavation, earthmoving, and other related construction activities. Internal-combustion engines that consume diesel and gasoline typically power these types of equipment and can have outputs ranging from 5 to 750 horsepower. Off-road equipment with diesel engines of 25 horsepower or larger are regulated by CARB for purposes of emissions reductions (13 CCR Section 2449). These regulations require operators to limit idling during operation and to upgrade older equipment with modern engines, which additionally provides benefits for the reduction of fuel consumption.

The transportation of workers and materials to and from project sites would require the consumption of diesel and gasoline fuels. Medium- and heavy-duty trucks and vans with Gross Vehicle Weight Ratings between 8,500 and 33,000 pounds would typically be used. Under CARB's Truck and Bus Regulations, vehicles with a Gross Vehicle Weight Rating greater than 14,000 pounds are required to have diesel engines built to 2010 standards as of 2023 (CARB 2025c). Construction activities would occur over the duration of the 2025 Blueprint horizon (i.e., 2050) at various locations throughout the plan area. The location, size, magnitude, and duration of construction activities within the plan area would depend on a number of factors, most of which are not known at this time and therefore cannot be quantified on an individual basis. However, construction activities, as compared to operational energy demand, would occur over discrete periods for each construction project.

Energy consumed as a result of implementation of the 2025 Blueprint Development Pattern and proposed transportation network improvements would only be used in quantities necessary to complete construction projects. Further, this energy would be used to achieve the 2025 Blueprint's goal of reducing VMT and associated fossil fuel consumption (compared to future conditions that do not follow the 2025 Blueprint), through additions and upgrades to the regional transportation network as well as facilitating compact development of complete communities in existing cities, towns, and suburbs. Thus, the energy consumption that would occur as a result of implementation of the 2025 Blueprint would not constitute "wasteful, inefficient, or unnecessary" use of energy.

Operations

Implementation of the 2025 Blueprint would increase electricity consumption in the region in buildings relative to existing conditions due to the projected regional housing and employment increases. Table 3.7-5, below, provides a summary of the estimated annual building energy consumption in 2020 and in the 2050 horizon year of the 2025 Blueprint. For further details regarding energy consumption modeling, see Appendix B.

Table 3.7-5 2025 Blueprint Per Capita Building Energy Consumption

Source	2020	2050	Net Change (2020 to 2050)
Electricity (kwh per capita)	21,471	17,895	-3,577
Natural Gas (therms per capita)	631	536	-94

Notes: kwh = kilowatt hour.

Source: Modeled by Ascent Environmental in 2025.

Notably, because the 2025 Blueprint is a land use and transportation plan designed to guide growth patterns in a manner that minimizes VMT by improving transportation efficiency, implementation of the 2025 Blueprint would not substantially affect per-capita non-residential energy use. However, as shown in Table 3.7-5, above, per-capita residential energy consumption would increase along with overall energy demand increases related to projected regional population growth through 2050.

All development under the proposed plan would, at a minimum, be built to meet the 2025 California Energy Code requirements, as the plan would begin to be implemented in early 2026 (pending adoption). Notably, the CalEEMod model assumes the 2019 Building Energy Efficiency Standards as its baseline energy code for default electricity and natural gas consumption. Thus, building energy consumption may be more efficient in the future than what is assumed in the estimations presented in Table 3.7-5 (i.e., as projects develop through 2050, they would be compliant with the current building codes, which are anticipated to require increased energy efficiency over time). According to CEC, the 2025 California Energy Code puts particular emphasis on encouraging efficient electric heat pump technology for space and water heating in newly constructed single-family, multifamily, and select nonresidential building types, replacing end-of-life rooftop heating, ventilation, and air-conditioning (HVAC) units of a certain size with high efficiency systems, establishing electric-ready requirements for commercial kitchens and some multifamily buildings, updating solar and storage standards for assembly buildings to make clean energy available for onsite use while minimizing exports to the electrical grid, and increasing ventilation standards to improve indoor air quality in multifamily buildings. As the 2025 Blueprint is implemented through 2050, the California Energy Code will continue to be updated on a triennial basis with the expectation that the mandatory requirements of the code will require increasingly more stringent energy efficiency requirements. This would result in increased building energy efficiency over time as buildings continue to be developed. Indirect energy use would include wastewater treatment and solid waste removal. Energy demand for these sectors would increase as housing and employment increases, because a greater number of people would be dependent on these sectors. However, the energy consumed by the wastewater treatment and solid waste sectors would also become more efficient over time due to increasingly stringent statewide energy efficiency standards.

Regarding transportation network improvements, the 2025 Blueprint would reduce VMT, and therefore energy consumption related to transportation, through expansion of existing rail and bus service, increased headways to reduce wait time between transit service, increased bicycle and pedestrian improvements, and targeted roadway and highway improvement and expansion. Further, State and federal regulations regarding fuel efficiency standards for vehicles in California are designed to reduce wasteful, inefficient, and unnecessary use of energy for transportation. For example, the Energy Independence and Security Act, the State of California Energy Action Plan, and AB 2076 aim to increase the fuel economy standard, encourage urban designing to reduce vehicle trip lengths and VMT, and reduce VMT per capita by encouraging alternative fuel usage, respectively.

With respect to operations of the planned transportation improvements, baseline per capita annual energy consumption was calculated for 2020 and compared to forecast use in 2050 (See Table 3.7-6). In 2020, annual per capita consumption was approximately 54 kilowatt hours of electricity, 340 gallons of gasoline, and 89 gallons of diesel fuel. Assuming the growth in the 2025 Blueprint, annual per capita gasoline and diesel fuel consumption is expected to decrease to 172 gallons of gasoline, 50 gallons of diesel by 2050, while per capita electricity consumption would increase to 546 kwh by 2050.

Table 3.7-6 Per Capita Mobile Source Energy Consumption in the Plan Area

Source	2020	2050	Net Change (2020 to 2050)
Electricity (kwh per capita)	57	571	515
Gasoline (gallons per capita)	356	180	-176
Diesel (gallons per capita)	93	52	-41

Notes: kwh = kilowatt hour

Source: Modeled by Ascent in 2025.

As shown in Table 3.7-6, gasoline and diesel fuel consumption per capita would decrease by 168 gallons and 39 gallons, respectively, while per capita electricity consumption used for transportation would increase by 492 kwh. The reasons for per capita gasoline reductions are twofold. First, the 2025 Blueprint is designed to reduce VMT per capita through a compact growth pattern, expansion of existing rail and bus service, increased headways to reduce wait time between transit service, increased bicycle and pedestrian improvements, and targeted roadway and highway improvement and expansion. This would result in fewer VMT per capita, and therefore less fossil fuel consumed per capita, as roadway efficiency is increased and alternative transportation is expanded and made more viable to reduce

single-passenger vehicle trips. Second, the 2025 Blueprint includes policies to support increased EV adoption in line with state requirements for ZEV sales (i.e., 100 percent of in-state sales of passenger cars and trucks being ZEVs by 2035; 100 percent of operating medium- and heavy- duty vehicles being ZEVs by 2045; and 100 percent of drayage trucks being ZEVs by 2035). As the number of EV vehicles increases, the amount of gasoline and diesel fuel consumed per capita will decrease as. This would also result in increased per-capita electricity consumption used to charge EV batteries, as shown in Table 3.7-6.

While overall regional VMT would increase as a result of increased population through 2050, per capita fossil fuel consumption would decrease as EVs become more widely utilized. The amount of renewable energy electricity used to charge EVs would also increase throughout the planning period per the state's requirements for renewable electricity (i.e., 60 percent renewable electricity by 2030, 90 percent renewable electricity by 2035, 95 percent renewable electricity by 2040, and 100 percent renewable electricity by 2045).

Implementation of the regional growth and land use changes and transportation network improvements and programs under the 2025 Blueprint would require increased energy consumption for temporary construction activities related to vehicle use and material transport. Once operational, land uses would increase the total amount of transportation-related energy, but the transportation energy would be more efficient on a per-capita basis. Land uses developed under the 2025 Blueprint would entail greater building energy and natural gas consumption in 2050 relative existing conditions.

According to Appendix F of the State CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall per capita energy consumption, decreasing reliance on oil, and increasing reliance on renewable energy sources. The 2025 Blueprint is designed to reduce VMT, and therefore transportation-related fossil fuel consumption, by facilitating compact development of complete communities in existing cities, towns, and suburbs and through creating a more efficient transportation system by way of transportation infrastructure improvements.

Therefore, energy consumed during construction and operation of the 2025 Blueprint would not be considered wasteful, inefficient, or unnecessary. This impact would be **less than significant.**

Mitigation Measures

No mitigation is required for this impact.

3.8 HAZARDS AND HAZARDOUS MATERIALS

This section provides regulatory context, describes current conditions related to the transport of hazards and hazardous materials and the presence of soil and groundwater contamination, and includes information about adopted emergency response and emergency evacuation plans. The analysis evaluates the potential for the 2025 Blueprint to create a substantial hazard due to the use, transport, or potential release through spill or disturbance of hazardous materials. This section also addresses safety hazards near airports and implementation of emergency response or evaluation plans.

Naturally occurring asbestos is addressed in Section 3.3, "Air Quality." Section 3.3 also includes discussion of hazardous air emissions, as raised in scoping comments. Exposure of people or structures to hazards associated with wildfire are discussed in Section 3.19, "Wildfire." Appendix A includes all comments received in response to the notice of preparation.

3.8.1 Regulatory Setting

FEDERAL

Management of Hazardous Materials

Various federal laws address the proper handling, use, storage, and disposal of hazardous materials, as well as requiring measures to prevent or mitigate injury to health or the environment if such materials are accidentally released. The US Environmental Protection Agency (EPA) is the agency primarily responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. Applicable federal regulations pertaining to hazardous materials are primarily contained in Code of Federal Regulations (CFR) Titles 29, 40, and 49. Hazardous materials, as defined in the Code, are listed in 49 CFR 172.101. Management of hazardous materials is governed by the following laws.

- The Toxic Substances Control Act of 1976 (15 US Code [USC] Section 2601 et seq.) regulates the manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials. Section 403 of the Toxic Substances Control Act establishes standards for lead-based paint hazards in paint, dust, and soil.
- The Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.) is the law under which EPA regulates hazardous waste from the time the waste is generated until its final disposal ("cradle to grave").
- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also called the Superfund Act or CERCLA) (42 USC 9601 et seq.) gives EPA authority to seek out parties responsible for releases of hazardous substances and ensure their cooperation in site remediation.
- The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499; USC Title 42, Chapter 116), also known as SARA Title III or the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), imposes hazardous materials planning requirements to help protect local communities in the event of accidental release.
- The Spill Prevention, Control, and Countermeasure (SPCC) rule includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires specific facilities to prepare, amend, and implement SPCC Plans. The SPCC rule is part of the Oil Pollution Prevention regulation, which also includes the Facility Response Plan rule (Title 40, Chapter 112).

Transport of Hazardous Materials

The US Department of Transportation (DOT) regulates transport of hazardous materials between states and is responsible for protecting the public from dangers associated with such transport. The federal hazardous materials transportation law, 49 USC 5101 et seq. (formerly the Hazardous Materials Transportation Act 49 USC 1801 et seq.) is the basic statute regulating transport of hazardous materials in the United States. Hazardous materials transport regulations are enforced by the Federal Highway Administration, the US Coast Guard, the Federal Railroad Administration (FRA), and the Federal Aviation Administration (FAA).

Worker Safety

The Occupational Safety and Health Act (29 CFR Section 1910.120) establishes regulations for employers that provide employees with an environment free from recognized hazards, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. Pursuant to Occupational Safety and Health Administration (OSHA) regulations, standard accident training for cleaning up small spills would be provided to all individuals prior to their work with hazardous substances, and the appropriate types and amounts of spill cleanup materials and personal protective equipment would be immediately available.

Code of Federal Regulations, Title 14, Part 77

The FAA's primary role is to promote aviation safety and control the use of airspace. Public use airports that are subject to FAA's grant assurances must comply with specific FAA design criteria, standards, and regulations. Land use safety compatibility guidance from FAA is limited to the immediate vicinity of the runway, the runway protection zones at each end of the runway, and the protection of navigable airspace. FAA enforces safety standards and investigates and corrects violations, as appropriate. Title 14, Part 77 of the CFR, Safe Efficient Use and Preservation of the Navigable Airspace, establishes the federal review process for determining whether proposed development activities in the vicinity of an airport have the potential to result in a hazard to air navigation. 14 CFR Part 77 identifies criteria that govern which projects require notice to be filed with FAA, as well as identifying standards for determining whether a proposed project would represent an obstruction "that may affect safe and efficient use of navigable airspace and the operation of planned or existing air navigation and communication facilities." Objects that are identified as obstructions based on these standards are presumed to be hazards until an aeronautical study conducted by FAA determines otherwise. 14 CFR Part 77.9, Construction or Alteration Requiring Notice, indicates that notice must be filed with FAA for any construction or alteration of objects within 20,000 feet of a public use airport runway when the height of the objects exceeds (i.e., is taller than) an imaginary surface with a 100:1 (1 foot upward per 100 feet horizontally) slope from the nearest point of the nearest runway. This requirement applies when the airport has at least one runway that exceeds 3,200 feet in length; for shorter runways, the notification surface has a 50:1 slope and extends 10,000 feet from the runway. For heliports, the notification surface has a 25:1 slope and extends 5,000 feet from the helicopter takeoff and landing area, commonly referred to as final approach and takeoff area. The notification requirements apply to all public-use airports, military airports, and heliports. When FAA notification is required, it must be provided using FAA Form 7460-1, Notice of Proposed Construction or Alteration.

Air Installation Compatibility Zones

The Air Installations Compatible Use Zones (AICUZ) program is a US Department of Defense (DoD) discretionary program designed to promote development compatible with military flight operations. DoD Instruction 4165.57 establishes the AICUZ program which is similar to the FAA's Federal Aviation Regulation Part 150 program for civil airports. AICUZ is a land use planning program not a land acquisition or land management program.

The purpose is to promote public health and safety through the local adoption of compatible land use controls, and to protect the operational capability of the air installation. The AICUZ program achieves these goals by promoting community growth that is compatible with airfield operations.

Code of Federal Regulations, Title 49

Title 49, Transportation, of the CFR includes hazardous materials regulations in the volume containing Parts 100–185 and governs the transport of hazardous materials in all modes of transportation: air, highway, rail, and water. Hazardous materials regulations are subdivided by function into four basic areas: Procedures and/or Policies (49 CFR Parts 101, 106, and 107), Material Designations (49 CFR Part 172), Packaging Requirements (49 CFR Parts 173, 178, 179, and 180), and Operational Rules (49 CFR Parts 171, 173, 174, 175, 176, and 177).

Pipeline and Hazardous Materials Safety Administration Hazardous Materials Regulations

The Pipeline and Hazardous Materials Safety Administration is the federal regulator for the movement of hazardous materials by rail. Regulations cover product classification, operating rules, and tank car standards.

Federal Railroad Administration Office of Railroad Safety

The FRA's Office of Railroad Safety promotes and regulates safety throughout the nation's railroad industry. The regional offices enforce compliance with regulations related to hazardous materials, motive power equipment, operating practices, signal and train control, and tracks. California is in Region 7, which is headquartered in Sacramento, California (FRA 2025).

International Fire Code

The International Fire Code (IFC), created by the International Code Council, is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The IFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The IFC and the International Building Code use a hazard classification system to determine what protective measures are required for fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the IFC employs a permit system based on hazard classification. The IFC is updated every 3 years and is the basis for the California Fire Code (CFC) (also updated triennially). Local jurisdictions, including cities and counties within the SACOG region, then adopt the CFC, in some cases with local amendments.

Federal Disaster Mitigation Act

The Disaster Mitigation Act of 2000 provided a set of mitigation plan requirements that encourage state and local jurisdictions to coordinate disaster mitigation planning and implementation. States are encouraged to complete a "Standard" or an "Enhanced" Natural Mitigation Plan. "Enhanced" plans demonstrate increased coordination of mitigation activities at the state level and, if completed and approved, increase the amount of funding through the Hazard Mitigation Grant Program.

STATE

California Fire Code

The CFC is Chapter 9 of California Code of Regulations (CCR) Title 24. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the California Building Code use a hazard classification system to determine what protective measures are required for fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years.

Management of Hazardous Materials

In California, both federal and state community right-to-know laws are coordinated through the Governor's Office of Emergency Services (OES). The federal law, SARA Title III or EPCRA, described above, encourages and supports emergency planning efforts at the state and local levels and provides local governments and the public with information about potential chemical hazards in their communities. Because of the community right-to-know laws, information is collected from facilities that handle (e.g., produce, use, store) hazardous materials above certain quantities. The provisions of EPCRA apply to four major categories:

- emergency planning,
- emergency release notification,
- reporting of hazardous chemical storage, and
- inventory of toxic chemical releases.

The corresponding state law is Chapter 6.95 of the California Health and Safety Code (Hazardous Materials Release Response Plans and Inventory). Under this law, qualifying businesses are required to prepare a Hazardous Materials

Business Plan, which would include hazardous materials and hazardous waste management procedures and emergency response procedures, including emergency spill cleanup supplies and equipment. At such time as the applicant begins to use hazardous materials at levels that reach applicable state and/or federal thresholds, the plan is submitted to the administering agency.

The California Department of Toxic Substances Control (DTSC), a division of the California Environmental Protection Agency (CalEPA), has primary regulatory responsibility over hazardous materials in California, working in conjunction with EPA to enforce and implement hazardous materials laws and regulations. Where groundwater contamination is the primary concern associated with the use, storage, or release of a hazardous material, the State Water Resources Control Board (SWRCB, which is also a division of CalEPA) is often the lead permitting agency. For example, individual regional water quality control boards (RWQCBs) under the SWRCB are responsible for identifying, monitoring, and cleaning up leaking underground storage tanks. The Central Valley RWQCB and Lahontan RWQCB have jurisdiction over the plan area.

As required by Section 65962.5 of the California Government Code, CalEPA maintains a hazardous waste and substances site list for the State, known as the Cortese List, that is used to inform project review and permitting. The list is a compilation of information resources contained on the websites of the boards or departments that are referenced in the statute, and consists of:

- Hazardous Waste and Substances sites from DTSC's EnviroStor database;
- leaking underground storage tank sites from SWRCB's GeoTracker database;
- solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit;
- "active" Cease and Desist Orders and Cleanup and Abatement Orders from the SWRCB that are related to discharge of wastes that are hazardous materials; and
- hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, as identified by DTSC.

A site's presence on the Cortese List has bearing on the local permitting process, as well as on compliance with CEQA. Under CEQA (PRC Section 21092.6), the lead agency is required to evaluate whether a project and any alternatives are located on a site which is included on the Cortese List. The lead agency must then include the information in the noticing required for a negative declaration or Draft EIR. Housing projects located on Cortese List sites cannot qualify for CEQA exemptions (see PRC 21159.21 and 21159.25). In addition, projects cannot apply the CEQA exemption established for projects that are consistent with a Sustainable Communities Strategy accepted by the California Air Resources Board if they are located on a site included on the Cortese List (PRC Section 21155.1[a][3]). Finally, Section 15183.3 of the State CEQA Guidelines provides a streamlined review process for infill projects that satisfy specified performance standards, which are established in Appendix M to the State CEQA Guidelines. One of these standards is specific to the Cortese List and requires substantial evidence to demonstrate that remediation of an identified site is complete, or that the project applicant will implement the recommendations provided in a preliminary endangerment assessment (PEA) or comparable document that identifies remediation appropriate for the site.

Transport of Hazardous Materials and Hazardous Materials Emergency Response Plan

The State of California has adopted DOT regulations for the movement of hazardous materials originating within the state and passing through the state; state regulations are contained in Title 26 of the CCR. State agencies with primary responsibility for enforcing state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). Together, these agencies determine container types used and license hazardous waste haulers to transport hazardous waste on public roads.

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local governments and private agencies. Response to hazardous materials incidents is one part of the plan. The plan is managed by OES, which coordinates the responses of other agencies in the plan area.

Management of Construction Activities

Through the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) and the National Pollution Discharge Elimination System (NPDES) program, RWQCBs have the authority to require proper management of hazardous materials during project construction. For a detailed description of the Porter-Cologne Act, the NPDES program, and the role of the Central Valley RWQCB and Lahontan RWQCB, see Section 3.9, "Hydrology and Water Quality."

The State Water Board adopted the statewide NPDES General Permit in August 1999 and it was updated in 2022 (2022-0057-DWQ). The state requires that projects disturbing more than 1 acre of land during construction file a Notice of Intent with the RWQCB to be covered under this permit. Construction activities subject to the General Permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters. A stormwater pollution prevention plan (SWPPP) must be developed and implemented for each site covered by the permit. The SWPPP must include best management plans (BMPs) designed to prevent construction pollutants from contacting stormwater and keep products of erosion from moving off-site into receiving waters throughout the construction and life of the project; the BMPs must address source control and, if necessary, pollutant control.

Asbestos Regulations

In 1990, the California Air Resources Board (CARB) issued an Airborne Toxic Control Measure (ATCM), which prohibited the use of serpentine aggregate for surfacing if the asbestos content was 5 percent or more. In July 2000, CARB adopted amendments to the existing ATCM prohibiting the use or application of serpentine, serpentine-bearing materials, and asbestos-containing ultramafic rock for covering unpaved surfaces unless it has been tested using an approved asbestos bulk test method and determined to have an asbestos content that is less than 0.25 percent. In July 2001, CARB adopted a new ATCM for construction, grading, quarrying, and surface mining operations in areas with serpentine or ultramafic rocks. These regulations are codified in Title 17, Section 93105 of the CCR. The regulations require preparation and implementation of an Asbestos Dust Mitigation Plan for construction or grading activities on sites greater than 1 acre in size with known naturally occurring asbestos (NOA) soils. The air districts enforce this regulation.

In October 2000, the Governor's Office of Planning and Research issued a memorandum providing guidance to lead agencies in analyzing the impacts of NOA on the environment through the CEQA review process. In November 2000, the California Department of Real Estate added a section to subdivision forms that includes questions related to NOA on property proposed for development. In 2004, as part of its school-site review program, DTSC's School Property Evaluation and Cleanup Division released interim guidance on evaluating NOA at school sites.

In addition, California Health and Safety Code Section 19827.5 prohibits issuance of demolition permits by local and State agencies without assessment of the potential for the structure to contain asbestos.

Worker Safety

The California Occupational Safety and Health Administration (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within the state. Cal/OSHA standards are typically more stringent than federal OSHA regulations and are presented in Title 8 of the CCR. Cal/OSHA conducts on-site evaluations and issues notices of violation to enforce necessary improvements to health and safety practices.

Title 8 of the CCR also includes regulations that provide for worker safety when blasting and explosives are utilized during construction activities. These regulations identify licensing, safety, storage, and transportation requirements related to the use of explosives in construction.

Senate Constitutional Amendment No. 13, 1945

Senate Constitutional Amendment No. 13 (Cal. Stats. 1945, Res. Ch. 145) established the California Public Utilities Commission (CPUC). CPUC, through the Railroad Operations and Safety Branch (ROSB), is a state agency that ensures the safety of freight railroads, inter-city and commuter railroads, and highway-railroad crossings in California. ROSB personnel investigate rail accidents and safety related complaints, and recommend safety improvements to CPUC, railroad operators, and the federal government. CPUC is responsible for enforcing federal and state railroad safety

requirements, including those governing railroad tracks, facilities, bridges, rail crossings, motive power and equipment, operating practices, and hazardous material shipping requirements. Public Utilities Code (PUC) Section 765.6 requires CPUC to report on all agency railroad-funded actions taken to ensure the safe operations of the railroads.

California State Aeronautics Act of 1951

At the state level, the Caltrans Division of Aeronautics administers FAA regulations (Stats. 1951, Ch. 764; PUC Section 21001 et seq.). The Division issues permits for hospital heliports and public-use airports, reviews potential and future school sites proposed within 2 miles of an airport, and authorizes helicopter landing sites at or near schools. In addition, the Division of Aeronautics administers noise regulation and land use planning laws, which regulate the operational activities and provides for the integration of aviation planning on a regional basis.

FAA regulations outline the statutory requirements for airport land use compatibility plans (ALUCPs), including referencing the Division of Aeronautics Airport Land Use Planning (ALUP) Handbook. The California ALUP Handbook was most recently updated in 2011. Lead agencies utilize the ALUP Handbook as a technical resource with respect to airport noise and safety compatibility issues. The California ALUP Handbook provides examples of safety zones for five types of general aviation runways, an air carrier runway, and a military runway. The shapes and sizes of the zones are largely based on the spatial distribution of potential aircraft accidents. The handbook provides a qualitative description of the land use characteristics considered acceptable or unacceptable within each of the basic safety zones.

The Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990

The Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990 granted the Office of Spill Prevention and Response (OSPR) the authority to direct prevention, removal, abatement, response, containment, and cleanup efforts with regard to all aspects of any oil spill in marine waters of California. OSPR implements the California Oil Spill Contingency Plan, consistent with the National Contingency Plan, which pays special attention to marine oil spills and impacts to environmentally and ecologically sensitive areas. In 2014, the OSPR program was expanded to cover all Statewide surface waters at risk of oil spills from any source, including pipelines and the increasing shipments of oil transported by railroads.

California Environmental Protection Agency

Executive Order W-5-91 established CalEPA in 1991 to oversee state environmental research and regulations. The California Accidental Release Prevention (CalARP) (Health and Safety Code Sections 25531–25543.3) is implemented by CalEPA and the state certified unified program agencies (CUPAs). CalEPA designates specific local agencies as CUPAs, typically at the county level. Each designated CUPA is responsible for the implementation of six statewide programs within its jurisdiction. These programs include:

- underground storage of hazardous substances,
- Hazardous Materials Business Plan requirements,
- Hazardous Waste Generator requirements,
- CalARP program,
- UFC hazardous materials management plan, and
- Above Ground Storage Tanks (Spill Prevention Control and Countermeasures Plan).

Implementation of these programs involves:

- permitting and inspection of regulated facilities,
- providing educational guidance and notice of changing requirements stipulated in state or federal laws and regulations,
- investigations of complaints regarding spills or unauthorized releases, and
- administrative enforcement actions levied against facilities that have violated applicable laws and regulations.

The CalEPA designated CUPAs for the six-county SACOG region are:

- El Dorado County – Environmental Management Department,
- Placer County – Environmental Health Services Department,
- City of Roseville – Fire Department,
- Sacramento County – Environmental Management Department,
- Sutter County – Environmental Health Services Department,
- Yolo County – Environmental Health Department, and
- Yuba County – Environmental Health Department.

Assembly Bill 380 of 2014

Assembly Bill (AB) 380 of 2014 (Gov. Code Section 11552) requires rail carriers to report specified information regarding the transportation of hazardous materials, including area traveled and estimated volume, to the California OES. Rail carriers are required to notify OES if there will be more than a 25 percent increase in the estimated volume of oil transported. Each rail carrier is required to maintain a response management communications center and prepare an emergency response plan with guidance provided by OES. OES is required to provide confidential copies of the emergency response plan to the appropriate CUPA impacted by an oil or hazardous material spill.

California Code of Regulations

Title 19 of the California Code of Regulations

The CalARP (CCR Title 19, Division 2, Chapter 4.5) covers certain businesses that store or handle more than a specified volume of regulated substances at their facilities.

Title 19 of the CCR, Division 2 established the California Emergency Management Agency (Cal EMA) and authorizes the agency to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with a SEMS could result in the state withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

Cal EMA serves as the lead agency for emergency management in the state. Cal EMA coordinates state response to major emergencies in support of local government. The primary responsibility for emergency management resides with local government. Local jurisdictions first use their own resources and, as these resources are exhausted, obtain additional resources from neighboring cities and special districts, the county in which they are located, and other counties throughout the state through the statewide mutual aid system. In California, the SEMS provides the mechanism by which local government requests assistance. Cal EMA serves as the lead agency for mobilizing the state's resources and obtaining federal resources and also maintains oversight of the state's mutual aid system.

CalARP applies to a wide variety of facilities that contain regulated substances, which are chemicals that pose a threat to public health and safety or the environment because they are highly toxic, flammable, or explosive, and to mitigate the effects of an accidental release. The CalARP Program is the federal "Risk Management Program" or "Federal Accidental Release Prevention Program" established in regulation by EPA, with additional requirements specific to the State of California, in accordance with the Health and Safety Code. This includes language that an environmental impact report shall not be certified or a negative declaration shall not be approved for any project involving the construction or alteration of a facility within one-fourth of a mile of a school that might reasonably be anticipated to emit hazardous air emissions, or that would handle an extremely hazardous substance or a mixture containing extremely hazardous substances in a quantity equal to or greater than the state threshold quantity specified pursuant to subdivision (m) of Section 25532 of the Health and Safety Code.

Title 22 of the California Code of Regulations

DTSC regulates hazardous waste under the authority of the Federal RCRA and the California Health and Safety Code. California has enacted legislation pertaining to the management of hazardous waste that is equivalent to, and in some

cases more stringent than, corresponding federal laws and regulations. DTSC, a department of CalEPA, is responsible for the enforcement and implementation of hazardous waste laws and regulations. The state's hazardous waste regulations are codified in Title 22 of the CCR, which addresses hazardous materials and waste. A valid registration issued by DTSC is required (22 CCR Division 4.5), unless specifically exempted, to transport hazardous waste.

Title 49 of the California Code of Regulations

The Hazardous Materials (HAZMAT) Regulations (49 CCR) advise shippers on safe handling and identification of potential risk through the classification of hazardous materials, packaging (including manufacture, continuing qualification, and maintenance), hazard communication (e.g., package marking, labeling, placarding, and shipping documentation), transportation, handling, HAZMAT employee training, and incident reporting.

California Education Code

The California Education Code, including *Education Code* Section 17213(b), establishes requirements for assessments and approvals that address the potential for existing contamination on the site, and whether nearby land uses might reasonably be anticipated to emit hazardous air emissions or handle hazardous materials. Assessment of existing contamination is conducted in coordination with DTSC's School Property Evaluation and Cleanup Division, which is responsible for assessing, investigating, and cleaning up proposed school sites. This division ensures that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who will occupy a new school.

Additionally, Sections 17215 and 81033 of the California Education Code states that proposals for K-12 schools and community colleges must disclose if they are within 2 miles of an airport. The evaluations aim to determine whether a proposed site provides an adequate level of safety and non-disruptive noise and, in so doing, enables the guiding principles of safety for the building occupants and comprehensive community planning.

California Health and Safety Code

Section 19827.5 of the Health and Safety Code requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos.

State fire regulations are set forth in Health and Safety Code Section 13000 et seq., which include regulations for building standards (as set forth in the California Building Code), fire protection and notification systems, fire protection devices, and fire suppression training.

Hauling hazardous waste is regulated under the Hazardous Waste Haulers Act (Division 20, Chapter 6.5 in the Health and Safety Code). It includes reasonable safeguards in handling hazardous waste, particularly in transporting hazardous wastes to disposal sites. It streamlines the state regulations concerning the transportation of hazardous waste, including all inspection, licensing, and registration of trucks, trailers, semitrailers, vacuum tanks, cargo tanks, and containers used to transport all types of hazardous waste for all local jurisdictions.

California Human Health Screening Levels

The California Human Health Screening Levels (CHHSLs) were developed as a tool to assist in the evaluation of contaminated sites for potential adverse threats to human health. Preparation of the CHHSLS was required by the California Land Environmental Restoration and Reuse Act of 2001. The CHHSLs were developed by the Office of Environmental Health Hazard Assessment (OEHHA), an agency under the umbrella of CalEPA, and are contained in its report entitled Human-Exposure-Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soil (OEHHA and CalEPA 2005). The thresholds of concern used to develop the CHHSLs are an excess lifetime cancer risk of one in 1 million and a hazard quotient of 1.0 for noncancer health effects. The CHHSLs were developed using standard exposure assumptions and chemical toxicity values published by EPA and CalEPA. The CHHSLs can be used to screen sites for potential human health concerns where releases of hazardous chemicals to soils have occurred. Under most circumstances, the presence of a chemical in soil, soil gas, or indoor air at concentrations below the corresponding CHHSLs can be assumed to not pose a significant health risk to people who may live (residential CHHSLs) or work (commercial/ industrial CHHSLs) at the site.

The Center for Environmental Health

The Center for Environmental Health under the California Department of Public Health administers programs that protect and manage food, drug, medical device, and radiation sources; regulate the generation, handling, and disposal of medical waste; oversee the disposal of low-level radioactive waste; provide laboratory support that ensures the public's safety from unsafe drinking water, food outbreaks and recalls. The Center comprises the Division of Food and Drug Safety, the Division of Radiation Safety and Environmental Management, and Environmental Health Support Section.

California Vehicle Code

The State of California Department of Motor Vehicles (DMV) requires all hazardous materials transporters to possess a commercial driver's license with a hazardous materials endorsement under the following circumstances:

- Hazardous materials shipments (unless specifically exempted) for which the display of placards is required (Vehicle Code Section 27903); and
- Hazardous materials shipments in excess of 500 lbs., transported for a fee, which would require placarding if shipped in greater amounts in the same manner.

In addition, the following general routing and parking restrictions (Vehicle Code Section 31303) apply to hazardous material and hazardous waste shipments for which the display of vehicle placards and/or markings is required (Vehicle Code Section 27903), except for those shipments subject to, and in conformance with, special routing and related requirements:

- Unless specifically restricted or prohibited, use state or interstate highways which offer the least transit time whenever possible (Vehicle Code Section 31304).
- Avoid, whenever practicable, congested highways, places where crowds are assembled, and residential districts (Vehicle Code Section 515).
- Deviation from designated routes is not excusable on the basis of operating convenience.
- A loaded vehicle is not to be left unattended or parked overnight in a residential district.
- Except for specifically restricted or prohibited highways, other highways may be used that provide necessary access for pickup or delivery consistent with safe vehicle operation.
- Highways that provide reasonable access to fuel, repairs, rest, or food facilities that are designed to and intended for commercial vehicle parking may be used, when that access is safe and when the facility is within 0.5 mile of the points of exit and/or entry to the designated route.
- Restricted or prohibited routes may only be used when no other lawful alternative exists. CHP also publishes a list of restricted or prohibited highways (Vehicle Code Section 31304).

State of California Emergency Plan

The State Emergency Plan outlines a state-level strategy to support local government efforts during a large-scale emergency. In accordance with the California Emergency Services Act, the State Emergency Plan describes methods for carrying out emergency operations, mutual aid processes, emergency services of governmental agencies, resource mobilization, emergency public information, and continuity of government. OES coordinates the responses of other agencies, including the CalEPA, the CHP, RWQCBs, air quality management districts, and county disaster response offices. OES helps provide resources for counties to publish emergency response and evacuation plans for the purpose of responding to potential emergency situations, such as wildfires, floods, and earthquakes. An update to the State Emergency Plan is in process, and a Coordinating Draft was released for public review in 2023.

California also has a Master Mutual Aid Agreement between all state departments, established in 1950, and a separate Law Enforcement Mutual Aid Plan and California Fire Service and Rescue Emergency Mutual Aid Plan, both published in 2014 by OES.

LOCAL

General Plans

Local planning policies related to hazards and hazardous materials are established in each jurisdiction's general plan, generally in the Safety Element or equivalent chapter. Safety Elements are required to address geologic hazards, fire hazards, dam failure, evacuation routes, flooding, and emergency response among other issues (see Section 3.3, "Air Quality," for information on asbestos, see Section 3.6, "Geology, Soils, and Paleontological Resources," for more information on geologic hazards, see Section 3.9, "Hydrology and Water Quality," for more information on dam failure and flooding, and see Section 3.19, "Wildfire," for more information on wildfire response and planning).

For emergency services, some of the relevant policies may include coordinating with agencies that are responsible for planning medical facilities to meet the health care needs of residents in the region, retaining hospitals, evaluating medical facility proposals, providing emergency response services, and participating in mutual-aid agreements.

Local Hazard Mitigation Plans

Local governments typically prepare local hazard mitigation plans that meet the requirements of Title 44 of the Code of Federal Regulations. An approved, adopted mitigation plan is a gateway to apply for Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance and High Hazard Potential Dam grant programs. In addition, if adopted into the Safety Element of the local general plan, local agencies could be eligible for increased cost sharing for Public Assistance under the California Disaster Assistance Act.

All local hazard mitigation plans have six required elements and one optional element, as mandated by federal requirements and guidance: planning process, hazard indicator and risk assessment, mitigation strategy, maintenance, plan update, plan adoption, and high hazard potential dams (optional). FEMA's *Local Mitigation Planning Policy Guide*, released April 2022 and effective April 2023, outlines the current standards to which FEMA and OES review each local hazard mitigation plan. Each plan must: address climate change when discussing hazard probability, vulnerabilities, and impacts; explicitly engage at-risk, underserved, and socially vulnerable populations; adequately address additional National Flood Insurance Program requirements and documentation; list state and federal major disaster declarations for the planning area since the last update when discussing previous hazard events; contain a mitigation strategy that includes an analysis of a comprehensive range of actions or projects that the participants consider to specifically address vulnerabilities identified in the risk assessment; and document the process for continued involvement of the public through implementation and maintenance.

Emergency Operations Plans

The California OES develops and maintains state-level emergency plans which are supported by county- and community-level plans. Local jurisdictions maintain emergency operations plans that detail how emergency and disaster situations are to be handled within that jurisdiction. Jurisdictions may also have Multi-Hazard Emergency Plans that address various threats to the jurisdiction.

Emergency Response and Evacuation Plans

At the local level, cities and counties publish emergency response and evacuation plans which detail how emergency and disaster responses are handled. These plans describe the protocols taken by the jurisdiction during an emergency or disaster event and typically include maps showing evacuation routes, the locations of resource aid areas after specific disaster events, and educational tips to be prepared for different types of disasters. In addition, fire departments and fire districts may adopt specific fire codes that are more restrictive than the fire code provided by CFC Chapter 9.

Regional Emergency Preparedness Strategy

In 2023, SACOG completed a Regional Emergency Preparedness Strategy to develop a clear vision for how transit assets and operators are deployed in evacuation situations in the Sacramento region. During an emergency, such as flood or fire, transit vehicles can be deployed to evacuate residents who may not have a private vehicle, including people in medical facilities and assisted living centers. This strategy lays out steps for SACOG and its transit partners to

take so that when an emergency hits part of our region, all of our resources can be efficiently deployed. The strategy's recommendations include developing plans to operate and maintain each other's transit fleets if one facility is shut down; using uniform, accessible, and transparent communication during emergencies; and investing in resilient energy storage systems to maintain Zero Emission Vehicles involved in transit operations during an emergency.

Airport Land Use Commissions and Airport Land Use Compatibility Plans

An airport land use commission (ALUC) is an agency that is required by state law in counties where there is an airport operated for the benefit of the general public. The purpose of an ALUC is to protect public health, safety, and welfare by ensuring the orderly development 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. The ALUC is responsible for developing and maintaining ALUCPs for areas around each airport.

ALUCs may request that all or selected land use actions (e.g., general plan update, specific plan, zoning ordinance, building regulation, land acquisition, annexation, or large development project) within an airport influence area (AIA) or airport influence zone be submitted for review for consistency with the ALUCP. An AIA is the area in which current or future airport-related noise, over flight, safety, and/or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses. The ALUC establishes its jurisdictional authority by designating one or more AIAs. If the ALUC has not designated an AIA, then a boundary within 2 miles of a public airport must be used instead (Public Utilities Code Section 21675.1[b]). City and county zoning and planning are required to conform to the ALUCP unless the city or county governing body specifically overrides the ALUCP by supermajority vote.

The SACOG Board of Directors serves as the ALUC for Sacramento, Sutter, Yolo, and Yuba counties. Comprehensive Land Use Plans (CLUPs) have been prepared for all airports in the SACOG ALUC area other than Rancho Murieta Airport. Additionally, ALUCPs have been adopted for El Dorado County Transportation Commission ALUC and Placer County Transportation Planning Agency ALUC.

3.8.2 Environmental Setting

For purposes of this section, the term "hazardous material" refers to both hazardous substances and hazardous wastes. A "hazardous material" is defined in the CFR as "a substance or material that … is capable of posing an unreasonable risk to health, safety, and property when transported in commerce" (49 CFR 171.8). California Health and Safety Code Section 25501 defines a hazardous material as follows:

> "Hazardous material" means any 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 into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

"Hazardous wastes" are defined in California Health and Safety Code Section 25141(b) as wastes that:

> … because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Hazardous materials exist in many forms such as liquids, solids, or contained gases, and can be man-made or naturally occurring. These materials can be found in many places such as in groundwater, construction materials, and rocks (asbestos). Various hazardous materials are commonly transported, stored, used, and disposed of in activities such as construction, manufacturing (both light and heavy), dry cleaning, film processing, landscaping, automotive maintenance and repair, and common residential/commercial maintenance activities. As described above, State and local regulatory agencies closely monitor businesses and industry in the control of hazardous materials. Worker

health and safety, administered by the OSHA, and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Hazardous materials require special methods of disposal, storage, and treatment, and any unintentional release of hazardous materials requires an immediate response to protect human health and safety, and the environment.

TRANSPORT OF HAZARDOUS MATERIALS AND WASTE

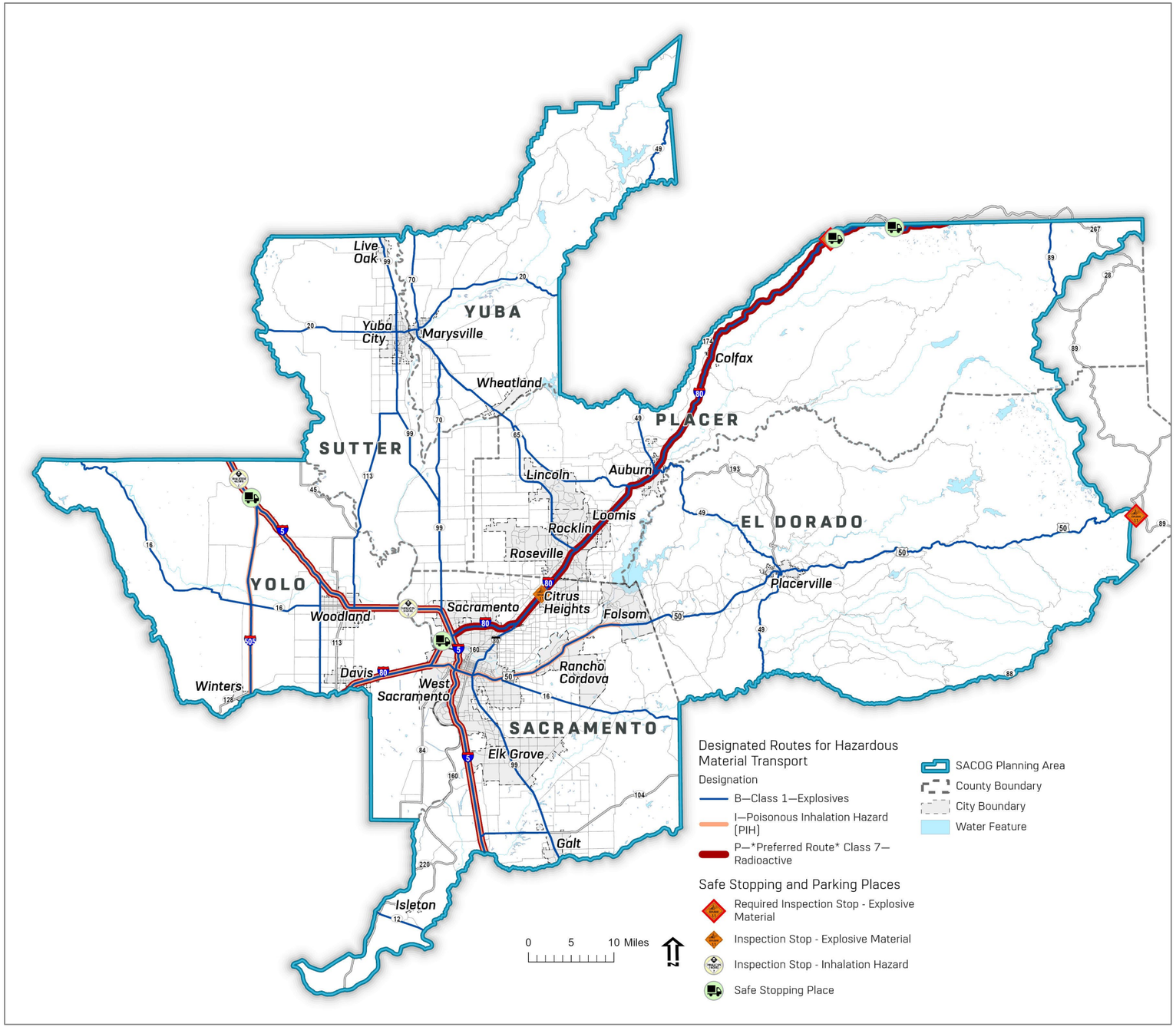
Hazardous materials, hazardous waste, and petroleum products are a subset of the goods routinely shipped along the transportation corridors in the plan area. In California, unless specifically exempted, it is unlawful for any person to transport hazardous waste unless the person holds a valid registration issued by DTSC. DTSC maintains a list of active registered hazardous waste transporters throughout California, and the California Department of Public Health regulates the haulers of hazardous waste. Three agencies maintain searchable databases that track hazardous material releases in reportable quantities: EPA maintains the Hazardous Materials Incident Report System, which contains data on hazardous material spill incidents reported to the DOT; OES maintains the California Hazardous Materials Incident Report System, which contains information on reported hazardous material accidental releases or spills; and SWRCB's Site Cleanup Program maintains information on reported hazardous material accidental releases or spills. DOT also provides grants to local agencies for preparing and training for hazardous materials incidents through its Hazardous Materials Emergency Preparedness Program, administered by OES. Shipments of hazardous materials and wastes include a wide variety of chemicals, such as petroleum products, medical waste, and radioactive materials. Each movement of hazardous materials/waste has a degree of risk, depending on the material being moved, the mode of transport, and numerous other factors. On a tonnage basis, petroleum products make up the majority—more than 80 percent—of hazardous material moved around the state (DOT 2011).

Truck

The transport of hazardous materials by truck is regulated by DOT. Figure 3.8-1 identifies the hazardous materials routes established by DOT in the plan area. Hazardous materials transported by truck use many of the same freeways, arterials, and local streets as other traffic.

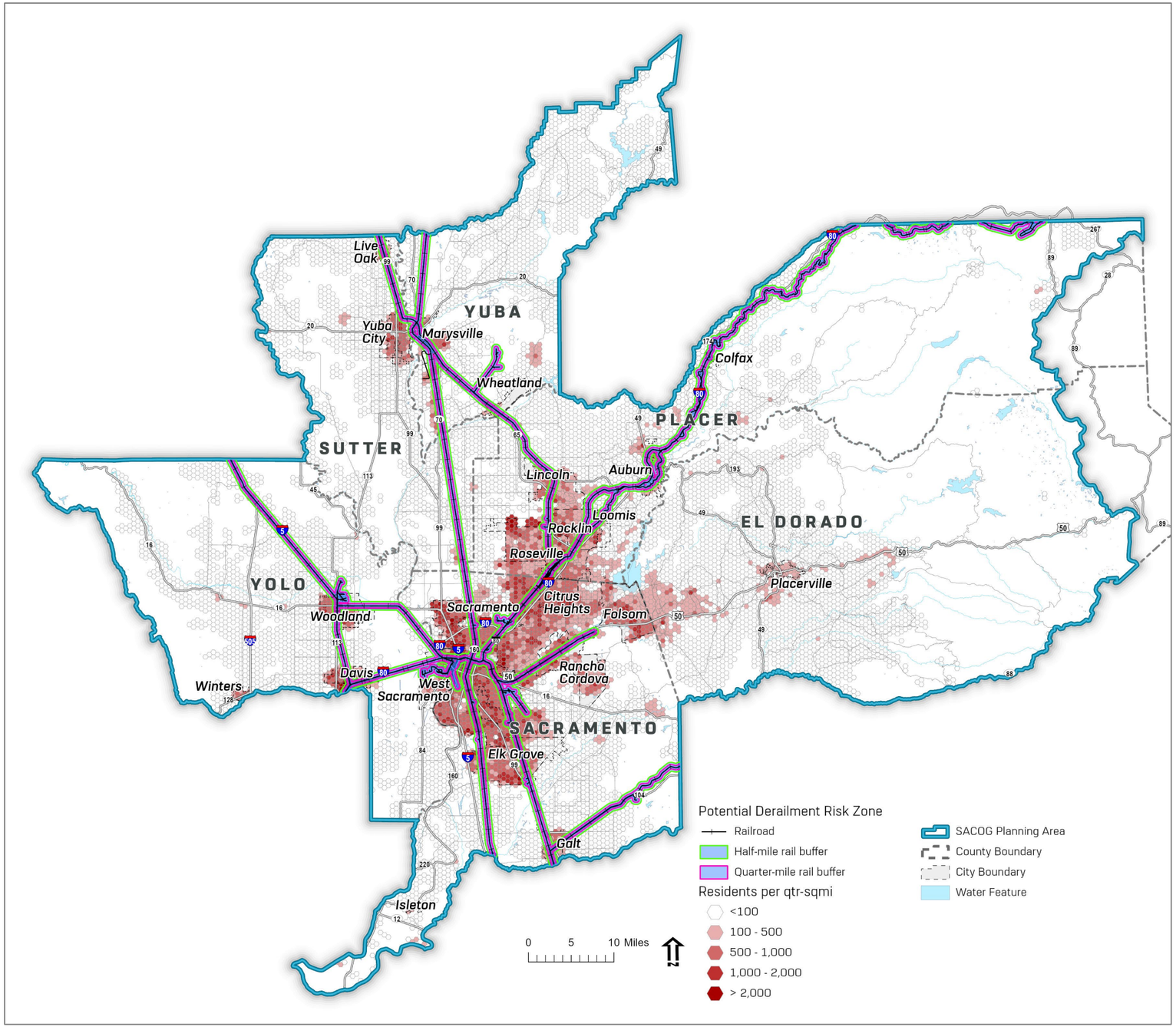
Railroad

The transport of hazardous materials by rail is also regulated by DOT. Freight railroads have employee safety training requirements and operating procedures that govern the handling and movement of hazardous goods, including crude oil. Federal regulations and self-imposed safety practices dictate train speeds, equipment and infrastructure inspections, and procedures for how to handle and secure trains carrying hazardous materials. The freight rail industry provides instruction to local public safety officials at the Transportation Technology Center's Security and Emergency Response Training Center, and individual railroads conduct additional local training for first responders (AAR 2025). Freight railroads also work with State emergency planning committees and local first responders to develop emergency response plans. In accordance with a February 2014 agreement between DOT and the Association of American Railroads, railroads have developed an inventory of emergency response resources and provided DOT with information on the deployment of those resources. This information is available upon request from appropriate emergency responders (AAR 2025). Figure 3.8-2 shows rail areas with a risk of derailment and population density to indicate how many people may be at risk in certain areas if a spill were to occur. Sacramento and Elk Grove within the SACOG region are defined as High Threat Urban Areas (HTUAs) due to the population density and potential for derailment defined by the Feight Rail Transportation Authority, a sector of the DOT. The HTUAs include a 10-mile buffer around each city and are shown in Figure 3.8-3.



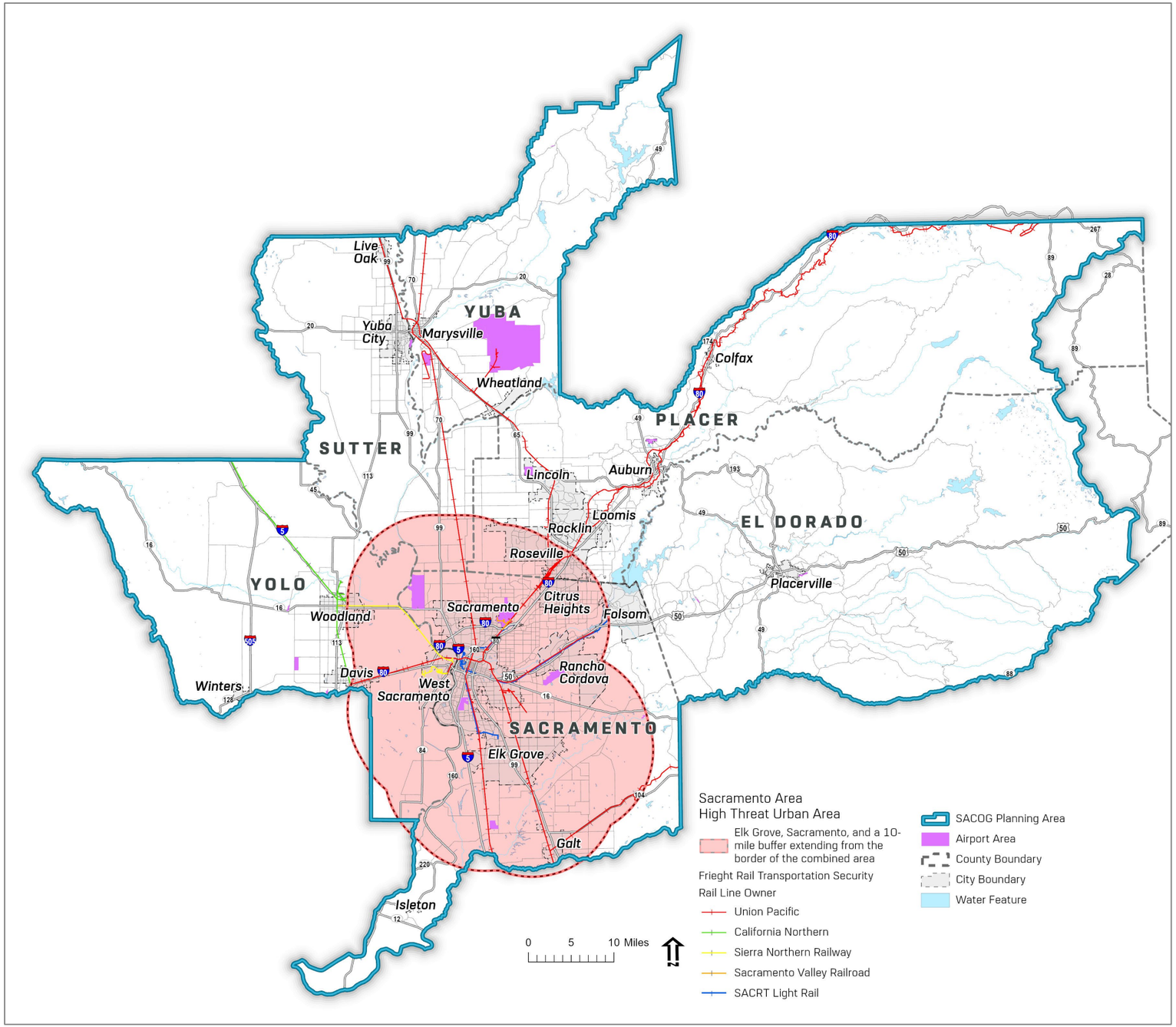
Source: Prepared by SACOG in 2025 based on data from the Department of Transportation.

Figure 3.8-1 Hazardous Materials Transportation Routes in the Plan Area



Source: Prepared by SACOG in 2025 based on data from the Department of Transportation.

Figure 3.8-2 Risk of Train Derailment and Buffer Zones in the Plan Area



Source: Prepared by SACOG in 2025 based on data from the Department of Transportation.

Figure 3.8-3 High Threat Urban Areas from Hazardous Materials Transport in the Plan Area

Transmission Pipeline

Underground (and in isolated instances, aboveground) pipelines are used to transport a variety of potentially hazardous substances throughout the plan area. The American Petroleum Institute recommends setbacks of 50 feet from petroleum and hazardous liquids lines for new homes, businesses, and places of public assembly. It also recommends 25 feet for garden sheds, septic tanks, and water wells and 10 feet for mailboxes and yard lights. The Transportation Research Board encourages the use of zoning regulations to minimize casualties in the event of a catastrophic rupture. Possible land use techniques include, for example, establishing setbacks; regulating or prohibiting certain types of structures and uses near transmission pipelines; and encouraging, through site and community planning, other types of activities and facilities (e.g., ministorage businesses, linear parks, recreational paths) within or in the vicinity of pipeline rights-of-way.

Potential for Existing Contamination of Transportation Corridors

Leaded gasoline was used as a vehicle fuel in the US from the 1920s until the late 1980s. Although lead is no longer used in gasoline formulations, lead emissions from automobiles are a recognized source of contamination in soils along roadways (i.e., aerially deposited lead). Surface and near- surface soils along and underneath heavily used roadways have the potential to contain elevated concentrations of lead. Generally, soils within 10 feet of the edge of the pavement and within the top 6 inches of the soil have the highest lead concentrations (DTSC 2016).

Contaminants common in railway corridors include wood preservatives (e.g., creosote and arsenic) and heavy metals in ballast rock. Ballast rock and soils associated with railroad tracks may also contain naturally occurring asbestos. In addition, soils in and adjacent to these corridors might contain herbicide residues because of historical and ongoing weed-abatement practices.

POTENTIAL PRESENCE OF HAZARDOUS MATERIALS IN SOIL AND GROUNDWATER

Hazardous materials, including pesticides and herbicides, heavy metals, volatile organic compounds, oil and gas, may be present in soil and groundwater in areas where land uses have resulted in leaking fuel or chemical storage tanks or where other releases of hazardous materials have occurred during routine use. Various federal, State, and local regulatory agencies maintain lists of hazardous materials sites where soil and/or groundwater contamination is known or suspected to have occurred. These facilities are readily identified through regulatory agency database searches, such as SWRCB's GeoTracker online database and DTSC's EnviroStor online database. These databases include closed sites that have been fully remediated; sites where contamination is contained but land use restrictions are in place; and sites under evaluation, active remediation, and monitoring. Sites listed on these databases are generally located in more densely populated areas with a history of light and heavy industrial uses. There are hundreds of sites in each county that are listed as closed, inactive, permitted, or no action is required. Because sites remain in the database following referral to another agency, remediation, and closure, there are some sites that are within both databases.

Table 3.8-1 lists, by county, the number of known hazardous materials sites in the plan area that are listed as active or open in the SWRCB and DTSC databases (i.e., sites where there is documented contamination that has not been fully remediated). Although not a comprehensive list of all potentially hazardous sites in the region, this list informs characterization of the plan area.

Table 3.8-1 Documented Active or Open Hazardous Materials Cleanup Sites in the SACOG Region

Sites	El Dorado County	Placer County	Sacramento County	Sutter County	Yolo County	Yuba County
GeoTracker cleanup sites	4	6	29	1	3	2
EnviroStor cleanup sites	0	2	17	2	3	1

Note: Sites may be listed in both databases. Active and open hazardous material sites include sites that have undergone site assessments, are eligible for closure, or are being actively monitored post-remediation activities.

Sources: DTSC 2025a; SWRCB 2025.

To address the potential for documented and undocumented hazards on a site, the American Society for Testing and Materials has developed widely accepted practice standards for the preliminary evaluation of site hazards. Phase I Environmental Site Assessments (ESAs) include an on-site visit to determine current conditions, an evaluation of possible risks posed by neighboring properties, interviews with persons knowledgeable about the site's history, an examination of local planning files to check prior land uses and permits granted, file searches with appropriate agencies having oversight authority relative to water quality and/or soil contamination, examination of historic aerial photography of the site and adjacent properties, a review of current topographic maps to determine drainage patterns, and an examination of chain-of-title for environmental liens and/or activity and land use limitations. If a Phase I ESA indicates the presence or potential presence of contamination, a site-specific Phase II ESA is generally conducted to test soil and/or groundwater. Based on the outcome of a Phase II ESA, remediation of contaminated sites under federal and State regulations may be required prior to development. Phase I ESAs can also be used to identify the potential for presence of hazardous building materials in situations where older structures intended for demolition could contain lead-based paint, asbestos containing materials, mercury, or polychlorinated biphenyls. The PEA process, which is typically conducted for sites with DTSC oversight, is similar, but includes screening evaluations and public participation.

In the eastern portion of the plan area, sites of identified contamination tend to be associated with historical use of the properties that include timber processing and mining. In Placer County, sites are distributed throughout the county and occur primarily in the established communities of Auburn, Loomis, and Roseville. Sites in El Dorado County are generally near El Dorado Hills. On the western side of the plan area, sites represent a mix of former land uses, including industrial use, a manufactured gas plant, landfill, and airport. In Yolo County, sites are concentrated in the cities of Davis and West Sacramento. In Sutter and Yuba counties in the northern portion of the plan area of the 2025 Blueprint, hazardous materials sites are primarily identified in Yuba City and Marysville.

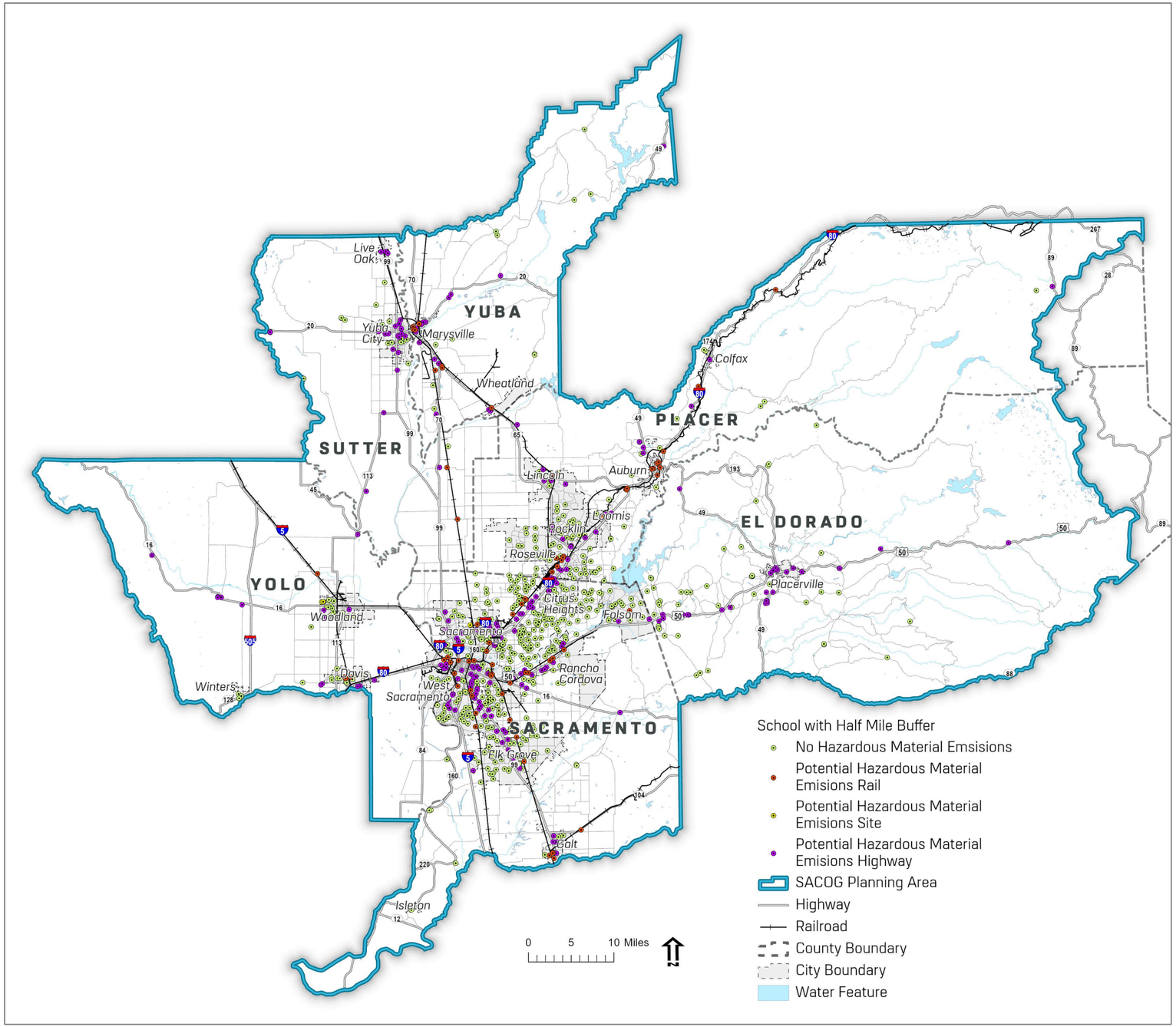
In Sacramento County, hazardous materials sites are primarily identified in the City of Sacramento and are associated with industrial and manufacturing uses. Two of the largest and most well-known contaminated sites in the region are the downtown Sacramento railyards and the GenCorp (Aerojet) property south of the intersection of Folsom Boulevard and Hazel Avenue. Both of these sites, as well as other Superfund sites, are being remediated. The railyards site is in the process of reuse in the form of a major redevelopment project adhering to the safety statutes in place to protect public health and safety. Other key areas of concern in the county are Mather and McClellan Air Force Bases.

Schools

Children are particularly susceptible to long-term effects from emissions of hazardous materials. Therefore, locations where children spend extended periods of time, such as schools, are sensitive to hazardous air emissions and accidental release associated with the handling of extremely hazardous materials, substances, or waste. There are nearly 740 public schools located throughout the SACOG region, as described further in Section 3.14, "Public Services." Figure 3.8-4 shows public schools in the SACOG region and identifies schools where there is a potential for hazardous emissions from highways, rail, or stationary sites within 0.25 mile of the school.

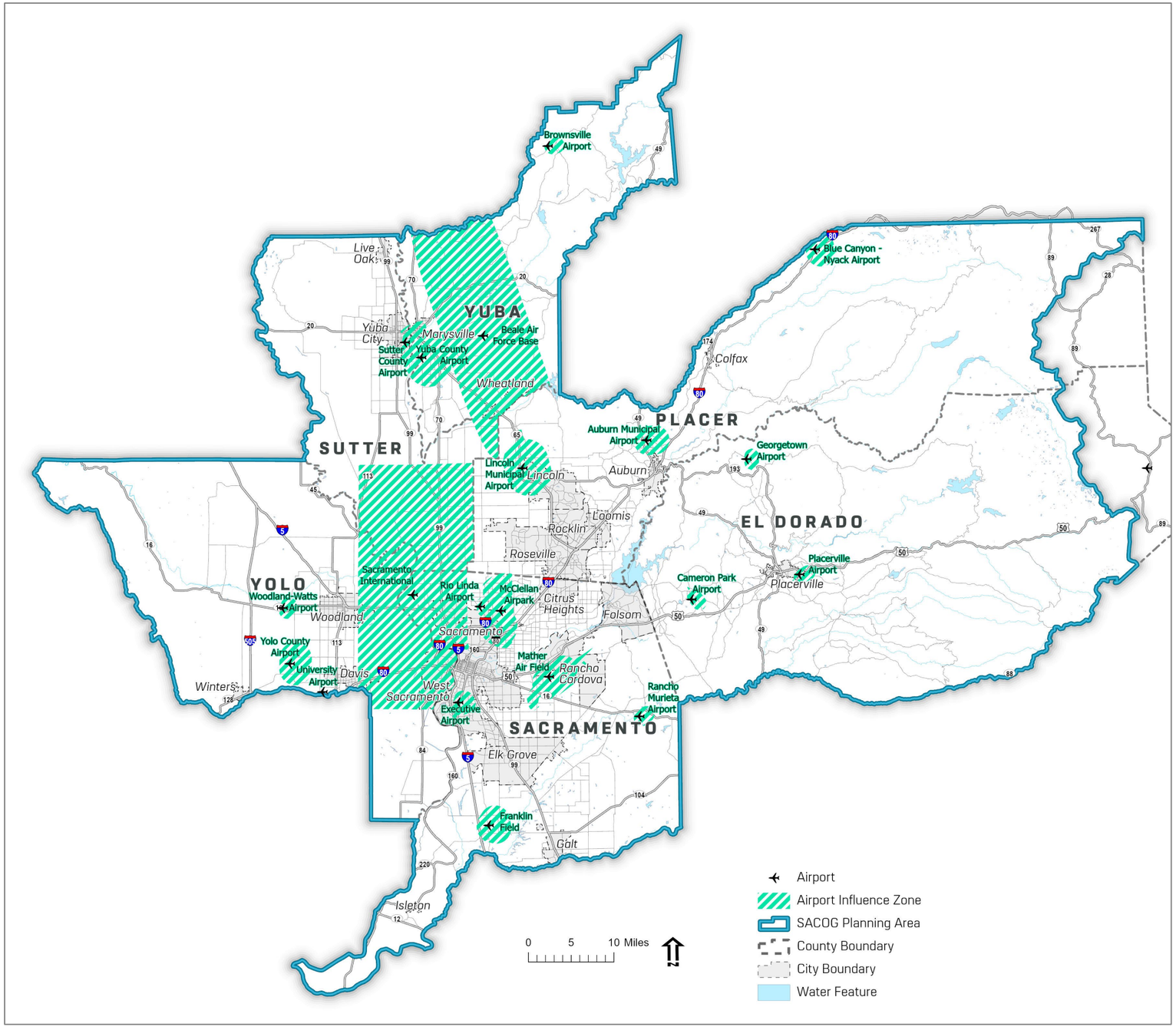
Airports

There are 22 public use airports in the SACOG region that serve commercial and general aviation users (see Figure 3.8-5 and Table 3.8-2). This regional airport system forms an integral part of SACOG's transportation network by providing links to communities throughout the United States and abroad. The Sacramento Region's three major public use airports are McClellan Airport, Sacramento International Airport, and Mather Airport. McClellan Airport is a 1,100-acre former military base that has transformed into a privately run business park home to several aviation-related businesses, the US Coast Guard Air Station, and 220,000 square feet of hangar space. Sacramento International Airport is a 5,900-acre airport that has 93,000 commercial flights annually, 13.7 million passenger trips, and moves over 113 million pounds of cargo. Potential hazards in relationship to airport operations are generally regulated by FAA, with local planning and evaluation of proposed projects (in terms of a proposed project's compatibility in relationship to air and ground operations and the safety of the public, as well as noise) under the authority of the applicable ALUC through ALUCPs. As shown in Figure 3.8-5, and explained above, these planning documents establish influence zones based on use and flight patterns that limit certain characteristics of future development to promote compatibility and reduce hazards.



Source: Prepared by SACOG in 2025 based on data from the Department of Education.

Figure 3.8-4 Public Schools in the Plan Area



Source: Prepared by SACOG in 2025 based on data from the Federal Aviation Administration.

Figure 3.8-5 Airport Influence Areas in the Plan Area

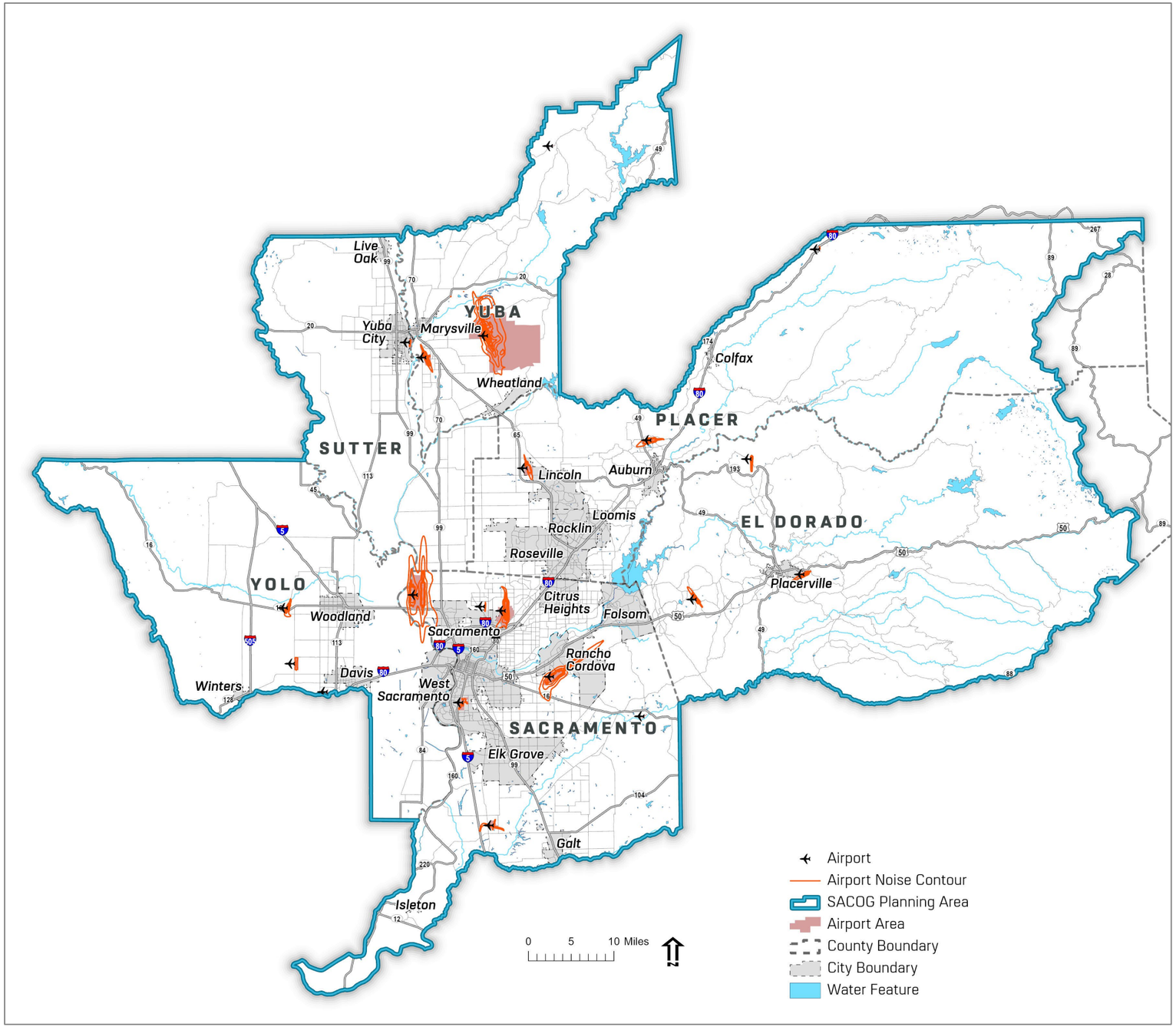
Table 3.8-2 Public Use Airports and Military Airfields in the SACOG Region

County	ALUC	Airport Name	ALUCP Adoption Date
El Dorado County	El Dorado County Transportation Commission ALUC	Cameron Park Airport	2012
El Dorado County	El Dorado County Transportation Commission ALUC	Georgetown Airport	2012
El Dorado County	El Dorado County Transportation Commission ALUC	Placerville Airport	2012
Placer County	Placer County Transportation Planning Agency ALUC	Auburn Municipal Airport	2014
Placer County	Placer County Transportation Planning Agency ALUC	Blue Canyon Airport	2014
Placer County	Placer County Transportation Planning Agency ALUC	Lincoln Regional Airport	2014
Placer County	Placer County Transportation Planning Agency ALUC	Truckee-Tahoe Airport (primarily in Nevada County, with a small portion in Placer County; represented by both counties through a special ALUC)	2014
Sacramento County	SACOG ALUC	Franklin Field	1992
Sacramento County	SACOG ALUC	Mather Airport	1997
Sacramento County	SACOG ALUC	McClellan Airpark	1992
Sacramento County	SACOG ALUC	Rio Linda Airport	1992
Sacramento County	SACOG ALUC	Sacramento Executive Airport	1999
Sacramento County	SACOG ALUC	Sacramento International Airport	2013
Sacramento County	SACOG ALUC	Sunset Skyranch	1992
Sutter County	SACOG ALUC	Sutter County Airport	1994
Yolo County	SACOG ALUC	Borges-Clarksburg Airport	1994
Yolo County	SACOG ALUC	Watts-Woodland Airport	1993
Yolo County	SACOG ALUC	Yolo County Airport	1999
Yuba County	SACOG ALUC	Beale Air Force Base	2011
Yuba County	SACOG ALUC	Brownsville Airport	1992
Yuba County	SACOG ALUC	Yuba County Airport	2011
Yolo County	University of California	UC Davis Airport (self-regulated)	N/A

Source: SACOG 2025, Placer County Transportation Planning Agency 2025, El Dorado County Transportation Commission 2025.

Aircraft and airport operations contribute to the overall ambient noise environment in the plan area. In addition to the numerous daily aircraft operations that originate and terminate at these airports, aircraft frequently travel through the region to reach other destinations. The intensity of aircraft noise exposure depends on proximity to the aircraft flight path; the type, speed, and altitude of the airplane; and atmospheric conditions. A map of airport noise contours provided in terms of CNEL is shown in Figure 3.8-6. Because noise levels described in terms of CNEL contain penalties for sound levels occurring during evening hours (5-decibels [dB] penalty) and sound generated during nighttime hours (10-dB penalty), the CNEL contours reflect the greater sensitivity to noise during those evening and nighttime hours.

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Source: Prepared by SACOG in 2025.

Figure 3.8-6 Airports and Airport Noise Contours in the Plan Area

Agriculture

Agricultural enterprises have historically stored, handled, and applied pesticides and herbicides within the plan area. Agricultural chemicals used before the 1970s often included highly persistent compounds such as DDT (dichlorodiphenyltrichloroethane). Inorganic compounds containing heavy metals such as arsenic, lead, and mercury were commonly used before the 1950s. Chemicals commonly used in the past have the potential to leave residual inorganic or organic components in shallow soils that could persist for many decades. If present in elevated concentrations, these residues could pose a potential health risk to future construction workers, residents, and other persons who may come in direct contact with surface soils.

Chemicals currently used in agriculture are generally less-persistent organic compounds. Because of today's stricter regulatory standards and product testing by EPA before commercial use, routine application of these materials does not generally result in accumulation to levels sufficient to cause health risk concern. However, there are other aspects of pesticide management that may result in impacts, including: pesticide-handling areas that lack concrete pads, berms, or cribs to contain spills or leaks during handling and storage; rinse water from washout facilities for pesticide-application equipment that has not been properly collected and treated before discharge; and equipment-repair and petroleum-storage areas. Phase I ESAs also account for historical or current use of agricultural chemicals that may be present in the project area (DTSC 2025b).

EMERGENCY RESPONSE AND EVACUATION

Natural disasters, events resulting in the release of hazardous materials into the environment, or an accident resulting from a hazard, necessitate preparation of local emergency response or evacuation plans. Based on existing and potential population densities and land use and informed by known hazards associated with commercial or industrial use of potentially hazardous materials, as well as the potential for natural hazards such as flooding and wildfire, these plans facilitate coordination between government agencies to provide central management for effective response in an emergency situation within a given area. Various levels of government are responsible for applying resources and emergency relief to those in the emergency area to minimize the effects of the hazards or hazardous materials. The local OES for each county in the SACOG region designs the emergency plan to coordinate the available resources and to effectively respond to natural and other types of disasters. Emergency plans outline the critical factors necessary during an emergency, including communications, transportation, a command station, control, and shelter. Emergency plans also often identify designated evacuation routes and procedures. The plans typically map areas prone to particular hazards and identify protocol for sheltering in place, evacuation, and the transport of individuals to acute care facilities, such as those identified in Table 3.8-3. The agreements discussed below relate to planning for and responding to such emergencies. For a discussion of services related to other types of emergencies (i.e., police protection and fire protection) see Section 3.14, "Public Services."

Table 3.8-3 Acute Care and Hospital Facilities in the Plan Area

County	City
El Dorado County	
Barton Memorial Hospital	South Lake Tahoe
Marshall Medical Center	Placerville
Placer County	
Kaiser Foundation Hospital - Roseville	Roseville
Sutter Auburn Faith Hospital	Auburn
Sutter Roseville Medical Center	Roseville
Sacramento County	
Kaiser Foundation Hospital - Sacramento	Sacramento
Kaiser Foundation Hospital - South Sacramento	Sacramento

County	City
Mercy General Hospital	Sacramento
Mercy Hospital of Folsom	Folsom
Mercy San Juan Hospital	Carmichael
Methodist Hospital of Sacramento	Sacramento
Shriners Hospitals for Children Northern Calif.	Sacramento
Sutter Medical Center, Sacramento	Sacramento
University of California Davis Medical Center	Sacramento
Vibra Hospital of Sacramento	Folsom
Sacramento Rehabilitation Center	Sacramento
Sutter County	
Sutter Surgical Hospital-North Valley	Yuba City
Yolo County	
Sutter Davis Hospital	Davis
Woodland Memorial Hospital	Woodland
Yuba County	
Adventist Health and Rideout	Marysville

Source: CalHHS 2024.

Mutual Aid Agreements

California's mutual aid system is designed to ensure that adequate resources, facilities, and other support are provided to jurisdictions whenever their own resources prove to be inadequate to cope with a given situation. Mutual aid coordination is addressed in the emergency response or evacuation plan. Each jurisdiction retains control of its own personnel and facilities, but can give and receive help whenever it is needed. State government, on the other hand, is obligated to provide available resources to assist local jurisdictions in emergencies.

To facilitate the coordination and flow of mutual aid, the state has been divided into six OES Mutual Aid Regions (and three administrative regions). Sutter and Yuba counties, and the jurisdictions therein, are in Region III. El Dorado, Placer, Sacramento, and Yolo counties, and the jurisdictions therein, are in Region IV. Through this mutual aid system, OES can receive a constant flow of information from every geographic and organizational area of the state. This includes direct notification that a disaster exists or is imminent. In some cases, it also includes information that makes it possible to anticipate an emergency and mitigate its effects by accelerating preparations or preventing a situation from developing to disaster proportions (CalOES 2025). To further facilitate the mutual aid process, particularly during day-to-day emergencies involving public safety agencies, Fire and Rescue Law Enforcement Coordinators have been selected and function at the Operational Area (countywide), Mutual Aid Region (two or more counties), and at the OES level.

3.8.3 Environmental Analysis

METHODOLOGY

This program-level impact analysis generally evaluates how implementation of the 2025 Blueprint, including changes to the land use pattern and transportation network, may produce adverse impacts related to hazards and hazardous materials. The 2025 Blueprint could cause several reasonably foreseeable situations that could result in the release of hazardous materials into the environment: accidents during transport of potentially hazardous materials used in construction or operation of land uses assumed in the 2025 Blueprint; the routine use of hazardous substances; and

generation of hazardous waste during construction and operation are discussed in Impact 3.8-1. Other reasonably foreseeable events that could result in exposure to potentially hazardous materials include hazards associated with structure demolition disturbance of unanticipated hazardous wastes in soil or groundwater, these are discussed in Impact 3.8-2. The potential for construction to encounter contaminated soil or groundwater associated with documented sites of historical contamination is addressed in Impact 3.8-4. Information from available literature, including documents published by federal, State, county, and city agencies is used to expand upon this analysis. Project construction and operation were evaluated against the hazardous materials information gathered from these sources to determine whether any risks to public health and safety or other conflicts would occur.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the project could have a significant adverse effect related to hazards and hazardous materials if it would:

- 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/or accident conditions involving the release of hazardous materials into the environment;
- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;
- be located on a site which 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;
- result in a safety hazard or excessive noise for people residing or working in the plan area due to a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport; or
- impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

ISSUES NOT DISCUSSED FURTHER

All of the topics identified in the significance criteria above are addressed in the following analysis.

Construction and operations that may be impacted by naturally occurring asbestos is covered comprehensively in Section 3.3, "Air Quality." The potential for the 2025 Blueprint to result in adverse effects related to exposing people or structures to a significant risk of loss, death, or injury involving wildland fires is described in Section 3.19, "Wildfire."

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.8-1: Create a Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials

Regional Growth and Land Use Change

Implementation of the 2025 Blueprint's Development Pattern would result in the development of a variety of land uses in areas identified for growth. Development activities associated with implementation of the proposed plan would temporarily increase the regional transport, use, storage, and disposal of hazardous materials and petroleum products commonly used in construction (e.g., diesel fuel, lubricants, paints and solvents, and cement products containing strong basic or acidic chemicals). In the longer term, development would be generally associated with sustained, expanded use of household hazardous materials (e.g., paints, cleaning supplies, solvents, and petroleum products). Many specific land uses (e.g., dry cleaners, gas stations, and certain industrial uses) could also involve

routine transport, use, and disposal of certain hazardous materials and wastes unique to the specific land use. The plan could indirectly contribute to the transport and use of hazardous materials in the plan area due to residential, commercial, and industrial demand for the materials associated with the Regional Growth Projections. As explained further below, these activities are subject to a suite of established regulations that address the potential for impacts from the routine transport, use, and disposal use of potentially hazardous materials. In addition, the regional growth pattern in the 2025 Blueprint focuses growth in more densely populated areas and along transportation corridors. This could result in the exposure of new sensitive receptors to risks related to the transport, storage, and use of hazardous materials that are exacerbated by the plan. To be declared a sustainable communities project under PRC Section 21155.1, projects in more densely populated areas must demonstrate that there would not be an "unusually high" risk of fire or explosion from materials stored or used on or near the property and the project would not result in a risk of exposure to a potentially hazardous material at levels that exceed State and federal standards.

Trucks transporting hazardous materials use many of the same freeways, arterials, and local streets as other traffic. This creates a risk of accidents and associated release of hazardous materials along these routes. Figure 3.8-1 maps the hazardous materials routes established by DOT in the plan area. Although the transportation of hazardous materials could result in accidental spills, leaks, toxic releases, fire, or explosion, the DOT Office of Hazardous Materials Safety prescribes strict regulations for the safe transportation of hazardous materials, as described in Title 49 of the CFR. These standard accident and hazardous materials recovery training and procedures are enforced by the State and followed by private State-licensed, -certified, and -bonded transportation companies and contractors.

Caltrans and other State agencies impose regulation through the Hazardous Waste Haulers Act (HSC Chapter 6.5), which regulates the identification, generation, transportation, storage, and disposal of materials deemed hazardous by the State of California. In California, any person who transports hazardous waste in a vehicle must have a valid registration issued by DTSC. The CHP enforces hazardous material and hazardous waste labeling and packing regulations. These regulations prevent leakage and spills of material in transit and provide detailed information to cleanup crews in the event of an accident.

FRA closely regulates the rail transport of crude oil and other hazardous materials. The transport of hazardous materials by rail is subject to requirements for handling, loading, and unloading, and the placement of placards to alert emergency response teams as to the contents of each car. FRA routinely inspects the facilities of shippers and railroads to ensure that all regulatory requirements are met. These regulations minimize the potential for accidental releases during transport of hazardous materials and wastes. Additionally, rail carriers are required to report specified information regarding the transportation of hazardous materials, including area traveled and estimated volume, to OES. Rail carriers are required to notify OES if there is more than a 25 percent increase in the estimated volume of oil transported. Each rail carrier is required to maintain a response management communications center and prepare an emergency response plan with guidance provided by OES. OES is required to provide confidential copies of the emergency response plan to the appropriate CUPA impacted by an oil or hazardous material spill.

Rupture of train cars carrying crude oil is a safety hazard because the spilled material could explode if exposed to an ignition source. Future development in existing urban locations near existing rail infrastructure and would most likely add people to the initial evacuation zone adjacent to operating rail lines. Standard safety procedures would result in the evacuation of these individuals immediately following derailment of a railcar carrying flammable liquid or gas, while standard response to release of other potentially hazardous materials (e.g., organophosphates, fertilizers) is to shelter in place. Contemporary building standards require construction of residences that are sufficiently contained (e.g., with doors and windows that seal) to allow sheltering in place to occur without substantial potential for harm to residents. The 2025 Blueprint is not anticipated to increase the potential for train accidents because subsequent development would not affect the alignment of the tracks and would not change sight lines or visibility. Further, regulations are in place that require railroads to address the potential hazards associated with unauthorized use or pedestrian crossing of the track, changes to volume of train transport that may indirectly result from forecast population growth, and necessary changes to the speed of travel on segments of track adjacent to areas where changes in land use occur.

During construction of land use and infrastructure projects, all hazardous materials would be stored, handled, and disposed of according to the manufacturers' recommendations and in compliance with federal, State, and local regulations. Small fuel or oil spills would have a negligible impact on public health due to the properties of these materials and because they would be discrete, localized releases. Spills would be resolved in accordance with applicable regulations so that there would not be long-term exposure or potential for contaminant migration. Hazardous materials spills or releases, including petroleum products, such as gasoline, diesel, and hydraulic fluid, regardless of quantity spilled, must be immediately reported if the spill has entered or threatens to enter a water of the State, including a stream, lake, wetland, or storm drain, or has caused injury to a person or threatens injury to public health. Immediate notification must be made to the local emergency response agency, or 911, and the OES Warning Center. For nonpetroleum products, additional reporting may be required if the release exceeds federal reportable quantity thresholds over a release period of 24 hours as detailed in California Health and Safety Code Hazardous Materials Release Response Plans and Inventory and Title 40, Chapter 112 of the CFR. Pursuant to OSHA regulations (29 CFR Section 1910.120), standard accident training for cleaning small spills would be provided to all individuals prior to their work with hazardous substances, and the appropriate types and amounts of spill cleanup materials and personal protective equipment would be immediately available. Additional requirements regarding hazardous materials labeling, containment, and covering set forth by the SWRCB Construction General Permit (2022-0057-DWQ) would also be implemented during construction.

Regional growth consistent with the 2025 Blueprint would increase the density of development in some areas to accommodate the growing population and would result in a variety of land uses that could increase the potential for upset or accident conditions involving the release of hazardous materials into the environment. Specific locations of all land uses are unknown, but regional development would generally increase the number of land uses that require the use and storage of hazardous materials. During operation, businesses that store hazardous materials could potentially experience accidents or upset conditions that result from their routine use. The severity of potential effects varies with the activity conducted and the concentration and type of waste present. These businesses are required to prepare spill prevention, containment, and countermeasures plans (pursuant to 40 CFR 112) or, for smaller quantities, spill prevention and response plans, that identify best management practices for spill and release prevention and provide procedures and responsibilities for rapidly, effectively, and safely cleaning and disposing of any spills or releases. Oversight is provided by the CUPA and California hazardous materials business plan (pursuant to HSC Section 25500), which specifies requirements for material inventory management, inspections, training, recordkeeping, and reporting. Additionally, businesses that generate hazardous waste are required to have an EPA identification number to monitor and track hazardous waste activities. As discussed above, the severity of potential effects varies with the activity conducted and the concentration and type of hazardous materials involved; however, most minor spills would be remediated immediately pursuant to the requirements and liabilities of applicable regulations and would not pose a substantial hazard to the public or the environment. The possible adverse effects on the public or environment from these and other activities would more likely be acute (immediate, or short-term severity) as a result of short-term exposure. The operation of businesses that use, create, or dispose of hazardous materials is regulated and monitored by federal, State, and local regulations that provide a high level of protection to the public and the environment from the hazardous materials manufactured within, transported to, and disposed of within the region.

CFR Title 40, Title 22 of the CCR, and the Hazardous Waste Haulers Act regulate the generation, transport, treatment, storage, and disposal of hazardous waste. These laws impose regulatory systems for handling hazardous waste in a manner that protects human health and the environment, including requirements for the classification of materials, packaging, and hazard communication. CalEPA oversees the regulation and management of hazardous materials on a Statewide level through DTSC. Use of hazardous materials requires permits and monitoring to avoid hazardous waste release through the local CUPA. DTSC is responsible for the enforcement and implementation of hazardous waste laws and regulations, codified in Title 22 of the CCR. Additionally, businesses that generate hazardous waste are required to have an EPA identification number to monitor and track hazardous waste activities. It is assumed that the subsequent projects under the proposed plan would comply with CFR Title 40; CCR Title 22; Hazardous Waste Haulers Act; EPA, and CalEPA requirements; hazardous materials training requirements; and any local regulations, such as city or county Hazardous Materials Management Plans regulating the generation, transportation, treatment,

storage, and disposal of hazardous materials and waste. Because these regulations are law and binding on responsible agencies and project sponsors, it is reasonable to expect that they would be implemented.

Transportation Network Improvements and Programs

Construction activities associated with constructing the planned transportation improvements would involve the short-term transport, use and storage of hazardous materials (e.g., asphalt, fuel, lubricants, paint) typical of transportation projects and similar to those identified above for land use projects.

The proposed transportation projects involve the expansion or extension of the transportation system, which may increase the capacity of roadways to transport hazardous materials. Transportation projects that expand the transportation system and extend it to new areas may expose more adjoining land uses to risks associated with upset on the roadway, highway, or railroad. As discussed above, implementation of federal, State, and local requirements, such as CalARP, DOT, and Caltrans regulations, would minimize potential exposure to the public and the environment from accidental releases. Roadway projects in the plan area would also improve road safety, as well as pedestrian and bicycle safety, thereby potentially reducing transportation-related hazardous materials risks because fewer accidents would occur on safer roads.

In addition, the 2025 Blueprint envisions improvements to two major rail lines that would strengthen connections between the plan area and the broader region, including the San Francisco Bay Area. The Sacramento to Roseville Third Track project on the Capitol Corridor, scheduled to be completed by 2029, would increase rail service from just one daily trip to 10 trips while preserving current Union Pacific Railroad freight operations and goods movement through the region. Valley Rail implements two new daily round trips for the Amtrak San Joaquins service to better connect San Joaquin Valley travelers with the Sacramento area and extends Altamont Corridor Express service between Sacramento and Merced via new stations and a shuttle link with the Sacramento International Airport. Any new or improved rail crossings would be subject to review by the affected railroads.

Based on the requirements of CFR Title 49, construction and operation of transportation projects would provide for the safe transport and disposal of hazardous waste. Because there are existing federal, State, and local regulations and oversight in place that would effectively reduce the inherent hazard associated with these activities to an acceptable level, impacts related to accident or upset of hazardous materials from anticipated modifications to the transportation system would be limited. Individual projects would be required to prove that they do not result in a risk of exposure to a potentially hazardous material at levels that exceed state and federal standards as part of their respective permitting and entitlement processes.

Summary

Because of the above-described regulation and oversight, impacts associated with the routine transport, use, or disposal of hazardous materials related to the projected land uses and planned transportation improvements from implementation of the 2025 Blueprint would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.8-2: Create a Significant Hazard to People or the Environment from the Use or Accidental Release or Upset of Hazardous Materials

Regional Growth and Land Use Change

The following discussion focuses on potential hazards associated with grading and demolition activities necessary to implement the regional growth pattern in the 2025 Blueprint. The regional growth pattern includes areas where redevelopment or new development would occur. In areas where redevelopment occurs, existing structures could be demolished. Demolition of existing structures could result in exposure of construction personnel and the public to hazardous substances. Construction workers and nearby employees and/or residents could potentially be exposed to airborne lead-based paint dust, asbestos fibers, and/or other contaminants because of demolition activities associated with redevelopment. Demolition of structures could result in inadvertent release or improper

disposal of debris containing potentially hazardous materials; however, federal, State, and local regulations have been developed to address potential impacts related to the handling and disposal of hazardous materials during demolition. Potential impacts would be minimized through adherence to regulatory standards that prescribe specific methods of material characterization and handling. For example, asbestos and lead abatement must be performed and monitored by contractors with appropriate certifications from the California Department of Public Health and must be conducted according to Cal/OSHA standards. Prior to demolition, all structures would be tested for the presence of hazardous materials related to manufacturing, inventory, and disposition of industrial chemicals during construction and operations, in accordance with 15 US Code Section 2601 et seq. and 40 CFR Chapter 112. Oversight is provided by CUPAs.

For the purposes of compliance with Cal/OSHA regulations, all coated surfaces would be assumed to potentially contain lead. Spent fluorescent light bulbs and ballasts, thermostats, and other electrical equipment may contain heavy metals, such as mercury, or polychlorinated biphenyls. If concentrations of these materials exceed regulatory standards, they would be handled as hazardous waste in accordance with hazardous waste regulations. In addition, Cal/OSHA has regulations concerning the use of hazardous materials, including requirements for safety training, availability of safety equipment, hazardous materials exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, describing the hazards of chemicals, and documenting employee-training programs.

Grading and excavation activities may expose construction workers and the public to hazardous substances present in the soil or groundwater that are not anticipated based on information about existing site conditions. These may be persistent chemicals associated with transportation corridors, improper commercial or industrial historical use or disposal, or past agricultural operations. These construction activities could inadvertently disperse contaminated material into the environment and expose construction personnel to potentially hazardous conditions. For example, dewatering activities during project construction could accelerate the migration of contaminated groundwater or could discharge contaminated groundwater to surface waters. Potential hazards to human health include ignition of flammable liquids or vapors; inhalation of toxic vapors in confined spaces, such as trenches; and skin contact with contaminated soil or water. These risks would be greatest for construction workers; however, it is possible that the nearby public could be affected if the contaminated materials are of a sufficient volume.

A common practice that is typically required by lending institutions when properties change hands is for a Phase I ESA to be prepared to research and disclose the prior uses of the site and the likelihood that residual hazardous materials and/or waste might be present in underlying soil and/or groundwater. Also, in many instances implementing agencies require submittal of a Phase I ESA prior to approval or implementation of a project. These studies include research in a variety of government databases to determine whether the site has had prior underground tanks or other industrial uses that could result in hazardous materials on or below the ground surface. As described above, if a Phase I ESA indicates the presence or potential presence of contamination, a site-specific Phase II ESA is generally conducted to test soil and/or groundwater. Based on the outcome of a Phase II ESA, remediation of contaminated sites under federal and State regulations may be required prior to development. Any transport of hazardous wastes required during remediation would occur in accordance with the regulations described in Impact 3.8-1.

Some project sites may be subject to a PEA, which is a type of environmental document typically prepared for sites with DTSC oversight. Overall, PEA requirements are more comprehensive than the requirements for Phase I ESAs. Although they require similar background information, they also include site-specific human health and ecological screening evaluations, public participation requirements, data collection, and scoping activities. The PEA requirement is applicable only to potential exemptions under the sustainable communities strategy provisions of CEQA and does not apply to the other streamlining strategies under Senate Bill 375.

Transportation Network Improvements and Programs

As described in detail above in the discussion of regional growth and land uses changes, transportation improvement projects could result in hazards to the public or the environment during grading and demolition activities necessary to implement the 2025 Blueprint. However, because the precise locations of future transportation projects are unknown, an evaluation of the potential for specific sites of known contamination within the plan area to be affected by project activities cannot be conducted at this time. As described above, there could be existing contamination in the rights-of-way associated with materials used to construct the infrastructure, and the buildup of materials like herbicides and aerially deposited lead. As with land use projects and development, exposure to these hazardous materials and wastes from construction of transportation projects could cause adverse effects on construction workers, the public, or the environment.

Summary

The above-described regulation and oversight, address the foreseeable upset and accident conditions involving the release of hazardous materials into the environment related to the known and anticipated effects of demolition and grading required to implement the 2025 Blueprint. However, due to the potential for undocumented residual contamination throughout the plan area, this impact would be **potentially significant**.

Mitigation Measures

SACOG does not have the authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following measure or other comparable measure identified by the lead agency at a project-level would reduce the impacts related to development on a site included on a list of hazardous materials sites, and agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081).

Mitigation Measure 3.8-1: Conduct Site-Specific Investigation to Characterize the Potential Presence of Hazardous Waste

The project proponent shall perform a records review to determine whether there is existing, permitted use of hazardous materials or documented evidence of hazardous waste contamination on the project site and provide the results of this investigation to the implementing agency.

For any sites that are not listed and do not have the potential for residual hazardous materials as a result of historic land uses, no action is required unless unknown hazards are discovered during development. In that case, the implementing agency shall discontinue development until DTSC, RWQCB, local air district, and/or other responsible agency issues a determination.

For any listed sites or sites that have the potential for residual hazardous materials as a result of historic land uses, project proponents shall prepare a Phase I ESA that meets ASTM standards. If a Phase 1 ESA prepared for a project contains recommendations, those shall be implemented for the project. If a Phase I ESA indicates the presence or likely presence of contamination, the project proponent shall prepare a Phase II ESA. Based on the Phase II ESA recommendations, the project shall implement and meet the standard remediation set forth in the Phase II ESA.

Significance after Mitigation

If hazards are identified before or during construction, State regulations pertaining to remediation would be triggered and Cal/OSHA regulations and responsibilities would be required to protect construction workers from hazards to health and safety. Mitigation Measure 3.8-1 would require thorough investigation of all potential development sites to limit the potential for unanticipated discovery of existing contamination during demolition or construction. If an implementing agency adopts this mitigation measure, the impact would be reduced to less than significant. Projects taking advantage of CEQA streamlining provisions of SB 375 (PRC Sections 21155.2 and 21159.28) must apply the mitigation measure described above to address site-specific conditions, resulting in impacts that are less than significant. However, because SACOG cannot require an implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation, Impact 3.8-4 would be **significant and unavoidable**.

Impact 3.8-3: Emit or Handle Hazardous Materials, Substances, or Waste Within 0.25 Mile of an Existing or Proposed School

Regional Growth and Land Use Change

Regional development would increase density and population, and it would include a variety of land uses, ranging from residential to commercial or industrial, that would increase the potential for hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. The 2025 Blueprint does not directly propose the siting of specific stationary sources of hazardous materials, but specific locations of all land uses are not identified and regional development would generally increase the number of land uses that require the use, storage, and transport of hazardous materials (e.g., gas, chemical) by truck or rail. Businesses that store large quantities of hazardous materials (e.g., gas storage facility or chemical warehouse), and accidents that result from transporting, pumping, pouring, emptying, injecting, spilling, and dumping or disposing, could release hazardous materials into the environment near schools.

There are approximately 820 existing schools within the plan area (Figure 3.8-4) and a variety of land uses are assumed in proximity to those schools. Impacts 3.8-1 and 3.8-2 above document an extensive set of existing federal and state regulations controlling emissions and the handling of hazardous materials. In addition, the potential effects on sensitive land uses, including schools, associated with potentially hazardous emissions from stationary sources and exposure to air contamination related to roadways is addressed in Section 3.3, "Air Quality."

For new schools that may be developed to serve the population growth and 2025 Blueprint Development Pattern, the California Education Code, including *Education Code* Section 17213(b), establishes requirements for assessments and approvals that address the potential for existing contamination on the site, and whether nearby land uses might reasonably be anticipated to emit hazardous air emissions or handle hazardous materials. Assessment of existing contamination is conducted in coordination with DTSC's School Property Evaluation and Cleanup Division, which is responsible for assessing, investigating, and cleaning up proposed school sites. This division ensures that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who would occupy a new school.

Any new commercial or industrial operations in proximity to existing schools would be required to comply with regulations related to the routine use, storage, and transport of hazardous materials. Proposed projects that would generate emissions or involve the handling of extremely hazardous materials, substances, or waste within 0.25 mile of an existing school would notify the affected school district (pursuant to Section 25532 of the California Health and Safety Code). As discussed in detail above, compliance with existing regulations would reduce the exposure to potential hazards associated with these land uses.

All proposed school sites that would receive state funding for acquisition or construction are required to go through a rigorous environmental review and cleanup process under DTSC's oversight. The state school siting process requires that emissions of hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school be addressed (HSC Section 25532; Edu. Code Section 17210 et seq.). Additionally, individual hazardous materials emitters or handlers must adhere to permitting requirements (HSC Division 20 Chapter 6.5) that require evaluation and notification of where potential materials handling and emissions could occur within 0.25-mile proximity of existing or proposed schools.

Transportation Network Improvements and Programs

The planned transportation improvements under the 2025 Blueprint could include transportation system expansions or extensions near schools; this is addressed through California HSC Section 25532 and Edu. Code Section 17210 et seq. These transportation improvements may increase the capacity to transport hazardous materials. These impacts are addressed through CalARP, which manages risks associated with accidental release. To prevent or minimize the accidental release of hazardous materials into the environment, precautions such as proper securing of the materials and container design are required by CalARP. California Vehicle Code Section 31303 outlines general routing and parking restrictions (Figure 3.8-1) for hazardous material and hazardous waste shipments and CHP publishes a list of

restricted or prohibited highways. Additionally, roadway improvements in the 2025 Blueprint would improve road safety, thereby reducing the potential for accidents in proximity of schools related to hazardous materials.

Summary

Therefore, as described above due to federal, state, and local regulatory approval and oversight for individual projects within the SACOG region, the regional impacts of hazardous materials use and transport within 0.25 mile of an existing or proposed school related to the Development Pattern or planned transportation improvements from implementation of the 2025 Blueprint would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.8-4: Result in Development on a Site Which is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5 and, as a Result, Create a Significant Hazard to the Public or Environment

Regional Growth and Land Use Change/Transportation Network Improvements and Programs

Throughout the plan area, there are many sites where historical releases of hazardous materials or wastes have occurred; these are listed in environmental databases pursuant to Government Code Section 65962.5. As indicated in Table 3.8-1, above, there are an estimated 70 documented active and open hazardous material sites that have undergone site assessments, are eligible for closure, or are being actively monitored post-remediation by DTSC or SWRCB in the plan area. There are hundreds of other sites that would be considered a hazardous site but have been closed, are inactive, permitted, or alternative status from the DTSC and SWRCB. These sites range from small releases that have had localized effects on private property and have already been remediated to large-scale releases from long-term historical industrial practices that have had wider ranging effects on groundwater. Specific sites of documented contamination are not evaluated in this analysis because this is a program-level document. Further, because the precise locations of future land use projects are unknown, an evaluation of the potential for specific sites of known contamination within the plan area to be affected by project activities cannot be conducted at this time.

Generally, the regional growth pattern could result in the development of sites with known contamination, including sites on the Cortese List and sites under active investigation and remediation. Unless construction activities are coordinated with site remediation activities, there could be a temporary increased risk of damaging or interfering with remediation site controls, such as soil containment areas. Temporary effects could include potential localized spread of contamination; exposure of construction workers or the public to chemical compounds in soils, soil gases, and groundwater; exposure of workers, the public, and the environment to airborne chemical compounds migrating from the demolition or construction areas; potential accidents during remediation as a result of operational failure of treatment systems; and potential interference with ongoing remediation activities.

As described above, the Cortese List is comprised of a group of publicly available database results that are routinely reviewed by permitting agencies in the process of discretionary reviews. To limit the potential that a project could proceed on a listed site without appropriate coordination and oversight, CEQA requires that projects located on sites that are listed on the Cortese List disclose the listing status and these projects are excluded from using specific CEQA exemptions. Projects proposing to streamline environmental review pursuant to PRC section 21155.1 may not be located on a site that is listed pursuant to Government Code Section 65962.5. Therefore, projects would not be eligible to streamline via this statute. Discretionary projects implemented in the plan area would, therefore, be evaluated for presence on the Cortese List. This would result in coordination with the remediating agencies to limit potential for interference with ongoing activities and evaluation to confirm that the level of remediation is compatible with the proposed land use. As stated above, the implementation of the 2025 Blueprint would involve grading and excavation activities.

Summary

The existing regulatory framework establishes a standard protocol for development of site listed pursuant to Government Code Section 65962.5 that adequately addresses the potential for development of land use or

transportation projects in the 2025 Blueprint to create a substantial hazard to the public or the environment. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.8-5: Result in a Safety Hazard or Excessive Noise for People Residing or Working in the Plan Area due to a Project Located near a Public Airport or Public Use Airport

Regional Growth and Land Use Change

Regional development could include a variety of land uses, ranging from residential to commercial or industrial, to provide increased goods and services to the region. The proposed land uses are identified in general terms, but specific locations of all land uses are unknown. As a result, it is unknown whether specific land uses would create a safety hazard within an AIA. Regional development could increase the number of new developments within an AIA and within airport hazard zones, creating hazards from tall structures, glare-producing objects, bird and wildlife attractants, radio waves from communication centers, or other features that have the potential to interfere with take-off or landing procedures or impact safety.

The projected land use pattern associated with implementation of the 2025 Blueprint may result in the development of residential and non-residential land uses in and near airport flight corridors and within areas subject to policies contained in an ALUCP. Development that is not compatible with aviation activity (e.g., tall structures, land uses that produce light/glare, land uses that attract wildlife that can be hazardous to aircraft, noise sensitive land uses) may lead to conflict between an airport operator and surrounding communities, as well as create long-term operational problems for the airport. To prevent incompatible uses in areas of higher aircraft hazard potential, the ALUC has adopted ALUCPs with land use policies and criteria. The policies identify what types of land uses are allowed around airports and are intended to protect the safety of people, property, and aircraft on the ground and in the air in the vicinity of the airport. The policies also protect airports from encroachment by new incompatible land uses that could restrict their operations. Structure replacement and infill development are generally permitted under ALUCPs. Implementing agencies are responsible for analyzing compliance with ALUCPs as a part of their land use approval authority.

ALUCs may request that all or selected land use actions (e.g., general plan, specific plan, zoning ordinance, building regulation, land acquisition, annexation, large development project) within the AIA be submitted for review for consistency with the ALUCP. City and county zoning and planning are required to conform to the ALUCP unless the city or county governing body specifically overrides the ALUCP by supermajority vote. Additionally, California statutes now require disclosure for most residential real estate transactions, including new subdivisions, within 2 miles of an airport or within an ALUCP-defined AIA. The Caltrans Division of Aeronautics is also required to review proposals for acquisition of a school site by school districts that are situated within 2 miles of an existing or planned airport runway (Edu. Code Sections 17215 and 81033). FAA evaluates projects located within 2 miles of a public use airport, and other projects that may pose a potential hazard or excessive noise for people residing or working in the project area, due to height, visual hazard, or the attraction of wildlife.

Public Utilities Code Section 21001 outlines the statutory requirements for ALUCPs, including referencing the Division of Aeronautics ALUP Handbook. The 1994 ALUP Handbook requires that when preparing an EIR for any project situated within an AIA as defined in an ALUC compatibility plan (or, if a compatibility plan has not been adopted, a boundary within 2 miles of a public use airport is used), lead agencies shall utilize the California ALUP Handbook as a technical resource with respect to airport noise and safety compatibility issues. The California ALUP Handbook was most recently updated in 2011.

Military airfields, such as Beale Air Force Base, are required to adopt Air Installation Compatibility Zone (AICUZ) studies to evaluate compatible land uses in the vicinity of military airfields. These studies assess compatible land uses in the vicinity of a military air station in a way equivalent to ALUCPs. PRC Section 21098 reduces hazards associated with development near military airports by requiring lead agencies to submit a notice to the military service that

would be affected by a proposed general plan amendment or significant project located within specific boundaries of a low-level flight path, military impact zone, or special use airspace.

The public airports and air bases in the region are listed by ALUC in Table 3.8-2. Figure 3.8-5 depicts the airport AIAs in the plan area. SACOG is the ALUC for Sacramento, Sutter, Yolo, and Yuba counties, with the exception of the UC Davis airport. The UC Davis Airport is self-regulated by the University of California, which also controls the surrounding land uses on university-owned land. Most SACOG ALUCPs use self-defined safety zones, runway boundary height restrictions (FAA Part 77), and noise boundary restrictions (ALUP Handbook) to define the AIA. FAA Part 77 defines specific boundaries in certain safety zones with a minimum approach surface of 5,000 feet for utility and visual runways, 10,000 feet for non-precision instrument runways other than utility or visual runways, and 16,000 feet for precision instrument runways. Safety zones generally cover the majority of the AIA, although noise contours extend beyond the safety zone boundaries for some airports.

Each CLUP and ALUCP identifies noise policies including noise compatibility standards related to the siting of new development. Subsequent projects under the 2025 Blueprint located further than 2 miles from an airport would not be subject to substantial noise from airport operations. However, due to the programmatic nature of this analysis, it is possible that development under the 2025 Blueprint would be proposed to be located within an airport land use plan or a 2-mile radius of an airport potentially exposing sensitive receptors to excessive noise. Subsequent projects would be subject to noise contour standards within each of the CLUPs and ALUCPs, including restrictions identified in the land use compatibility guidelines for each of the region's airports as well as airport noise standards established in the applicable general plan. These standards would preclude development of sensitive receptors within areas deemed as incompatible. Projects seeking approval within a noise contour that is deemed inappropriate for the siting of the proposed land use by the ALUC would require an acoustical study. Through the mandated review process, noise reducing measures would be required to address the condition through specific design characteristics (e.g., windows that reduce indoor noise to acceptable levels). Therefore, the 2025 Blueprint would not expose people residing or working in the plan area to excessive airport noise.

The FAA requires notice of proposed construction for projects located within 20,000 feet (less for runways under 3,200 feet in length) of a public use airport, and other projects that may pose a potential hazard for people residing or working in the project area, due to height, visual hazard, or the attraction of wildlife. Development projects associated with the plan would be subject to FAA evaluation, and the FAA would be notified of proposed development pursuant to Section 77.11 of the FAA regulations. The notification provides the basis for the FAA to evaluate the proposed development projects for obstruction hazards and potential hazards to air safety.

Implementing agencies would require project sponsors to comply with any applicable ALUCP requirements, as well as any FAA requirements (14 CFR Part 77). Projects within an ALUCP or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport would not be approved by local agencies until project design plans have been reviewed and approved by the appropriate ALUC. Because existing regulations and laws related to development near a public airport prohibit the approval of incompatible projects, these existing regulations and permitting requirements of the independent regulatory agencies can be relied upon to address potential project effects.

Transportation Network Improvements and Programs

A variety of improvements are included in the 2025 Blueprint, such as new HOV lanes, auxiliary lanes, roadway widening, bicycle and pedestrian infrastructure improvements, transit facilities, increased transit service, and roadway maintenance and rehabilitation projects. Transportation projects that fall within AIA and ALUCP boundaries could potentially result in adverse safety hazard impacts. However, airport regulations are not intended to preclude access to and from the airport and are therefore not applicable to the transportation improvements included in the 2025 Blueprint. Additionally, the improvements included in the 2025 Blueprint are more likely to improve safety through improvements to the roadway network and decrease trips through improvements to public transportation than cause hazards or interfere with airport operations.

Summary

Based on the regulatory environment described above, regional aviation hazard impacts related to land use pattern or planned transportation improvements from implementation of the 2025 Blueprint would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.8-6: Impair Implementation of, or Physically Interfere with, an Adopted Emergency Response Plan or Emergency Evacuation Plan

Regional Growth and Land Use Change

Emergency response and emergency evacuation plans are designed by the OES for each county in the SACOG region for the purpose of responding to potential emergency situations (e.g., fires, floods, or earthquakes). OES plans encompass the entire plan area of the 2025 Blueprint, including incorporated and unincorporated areas, special districts, and university and tribal lands. These plans provide a process for evacuating people from danger, therefore preventing or minimizing loss of life and property.

Implementation of the 2025 Blueprint does not include any changes to the policies or requirements within any of the established emergency plans discussed above in Section 3.8.1, "Regulatory Setting." In addition, although increased projected development and changes in land use are proposed, emergency response plans are regularly updated to reflect changing conditions. However, the projected land use pattern and subsequent development activities in the 2025 Blueprint may occur in areas where existing emergency response and evacuation plans may not have accounted for the same level of growth as would occur under the plan. Development that proposes large concentrations of people or special needs individuals (such as stadiums or hospitals) in an area with increased hazards (such as a dam inundation area) could cause adverse effects related to the implementation of countywide and jurisdictional emergency plans and could overburden adopted evacuation routes and other emergency response resources. Certain tall structures can physically interfere with the implementation of emergency response if the height of the structure or tower interferes with the ability of emergency air support services to carry out missions associated with an emergency response. Additional impacts could occur if the authorities are not properly notified, or if multiple projects are constructed at the same time and therefore result in concurrent blockage of multiple roadways used for emergency routes. Failure to provide reasonable access for emergency equipment and evacuation of civilians can result in the major loss of life, property, and natural resources.

In an emergency event, local jurisdictions use their own resources or those of agencies that are tied to the local jurisdiction via mutual aid agreements. If more resources are needed, Cal EMA coordinates the state's response efforts. Cal EMA is also responsible for collecting, verifying, and evaluating information about the emergency, facilitating communication with local government, and providing affected jurisdictions with additional resources when necessary.

SACOG has no land use authority to adopt local land use plans or approve local land use projects; therefore, the Development Pattern included in the 2025 Blueprint serves as a recommended implementation of local land use plans and is used to show the spatial distribution of growth in the plans of local jurisdictions. As required by OES, emergency and evacuation plans are revisited for frequent updates to adequately plan for growth within the region and ensure consistency with general plans. Increased population and residential densities consistent with the 2025 Blueprint would be reflected in updated emergency and evacuation plans. Emergency plans and programs, including mutual aid agreements, are in place on a state, regional, countywide, individual jurisdiction, and special district level that contain measures to reduce impacts associated with conflicts with emergency response and evacuation plans. Emergency services would be evaluated and updated as population demographics and centers change, the state provides resources and guidance for these updates through OES for local regulators and emergency planners.

Transportation Network Improvements and Programs

Planned transportation improvements in the 2025 Blueprint include projects planned for many of the roadways and highways designated as evacuation routes or potential evacuation routes in the emergency plans, which are identified in individual jurisdiction evacuation and emergency plans. Many of the proposed transportation improvements would be located within already urbanized areas of the plan area that have existing roadway infrastructure. Implementation of the transportation network improvements in and of themselves would not impair or physically interfere with the implementation of any adopted emergency response plan or emergency evacuation plan.

Although the planned transportation network improvements and programs would not specifically require or propose the impairment of an adopted emergency response plan or emergency evacuation plan, construction of these transportation projects has a potential to generate temporary roadway diversions during construction, which could affect traffic flow, emergency services, and evacuation routes. To address this, individual transportation projects would be required to obtain an encroachment permit that would allow for the temporary diversion of both automobile traffic and pedestrian routes for the duration of construction activities. These encroachment permits for temporary construction activities in public roadways are required to prepare construction traffic management plans that specifically disclose road closures, address pedestrian and automobile circulation around the proposed project site, notify emergency responders of these closures and available alternate routes, and provide on-site signage indicating the construction work occurring and safe alternate routes around the construction site. These construction traffic management plans are consistent with local and regional general plans, local municipal and regional codes of ordinances regarding construction work activity and notification, and align with the goals and policies of emergency response plans and emergency evacuation plans, which include emergency services and evacuation resulting from wildfires. To address any temporary road closures that would be required during construction, standard construction mitigation includes notification of emergency responders.

Design, operation, and maintenance of individual transportation projects would also be required to comply with applicable state, county, or municipal fire code requirements. Transportation network improvements and programs planned in the 2025 Blueprint would prioritize improvements that provide a safe and reliable system of multimodal transportation that involves rapid bus transit, light rail, bike routes, and increased pedestrian connectivity and less reliance on automobile transportation. Compared to existing conditions, improvements to existing roadways that focus on multi-modal transportation would improve overall vehicle circulation within and throughout the plan area, including how emergency services circulate. In addition, as described above, emergency plans and programs are in place on a state, regional, countywide, individual jurisdiction, and special district level that contain measures to reduce impacts associated with conflicts with emergency response and evacuation plans. These existing measures ensure transportation network improvements would allow for easier evacuations.

Summary

Although the planned land uses and planned transportation improvements from implementation of the 2025 Blueprint could interfere with emergency response and evacuation during construction, implementing agencies would require compliance with state and local requirements regarding evacuation planning. The 2025 Blueprint is a policy document that does not include any site-specific designs or proposals and does not propose any entitlements for development that would have the potential to impair or conflict with an adopted emergency response or evacuation plan. Any future development projects, including buildout of uses contemplated in the Development Pattern, would be subject to all applicable local regulations, reviews, and requirements pertaining to emergency response, emergency access, and maintaining emergency evacuation routes. For these reasons, regional land use projects, transportation network improvements, and programs planned in the 2025 Blueprint would be required to comply with state, regional-level, and local emergency response and emergency evacuation plans and applicable fire code requirements. Regulatory compliance would ensure that land use and transportation projects would not substantially impair an adopted emergency response plan or emergency evacuation plan. Therefore, regional emergency evacuation plan impacts related to the projected land use pattern and planned transportation improvements from the implementation of the 2025 Blueprint would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

3.9 HYDROLOGY AND WATER QUALITY

This section identifies the regulatory context and policies related to hydrology and water quality, the existing hydrologic conditions of the plan area, and evaluates potential hydrology and receiving water quality impacts of the proposed 2025 Blueprint. Potential effects on the capacity of water supply, sewer/wastewater, and drainage/stormwater facilities are addressed in Section 3.17, "Utilities and Service Systems." Potential effects related to transportation, storage, and disposal of hazardous materials are addressed in Section 3.8, "Hazards and Hazardous Materials."

In response to the notice of preparation, SACOG received one comment related to hydrology and water quality. During the February 26, 2025 scoping meeting, information was requested about the effects of groundwater withdrawal necessary to supply new homes with water. This comment has been carefully reviewed and considered by SACOG and is reflected in the analysis of impacts in this section. Appendix A includes all comments received in response to the notice of preparation and a summary of the scoping meetings.

3.9.1 Regulatory Setting

FEDERAL

Clean Water Act

The US Environmental Protection Agency (EPA) is the lead federal agency responsible for water quality management. The Clean Water Act (CWA) is the primary federal law that governs and authorizes water quality control activities by EPA as well as the states. Various elements of the CWA address water quality. These are discussed below.

CWA Water Quality Criteria/Standards

Pursuant to federal law, EPA has published water quality regulations under Title 40 of the Code of Federal Regulations. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the act, water quality standards consist of designated beneficial uses of the water body in question and criteria that protect the designated uses. Section 304(a) requires EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. As described in the discussion of state regulations below, the State Water Resources Control Board (SWRCB) and its nine regional water quality control boards (RWQCBs) have designated authority in California to identify beneficial uses and adopt applicable water quality objectives.

CWA Section 303(d) Impaired Waters List

Under Section 303(d) of the CWA, states are required to develop lists of water bodies that do not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). Section 303(d) requires that the state develop a total maximum daily load (TMDL) for each of the listed pollutants. The TMDL is the amount of the pollutant that the water body can receive and still comply with water quality objectives. The TMDL is also a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. In California, implementation of TMDLs is achieved through water quality control plans, known as Basin Plans, of the RWQCBs.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. NPDES permit regulations have been established for broad categories of discharges including point source waste discharges and nonpoint source stormwater runoff. Each NPDES permit identifies limits on allowable concentrations and mass discharge of

pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits.

"Nonpoint source" pollution is diffuse contamination that does not originate from a discrete source. Nonpoint source pollution often enters receiving water in the form of surface runoff and is not conveyed by way of pipelines or discrete conveyances. Discharges caused by general construction activities are considered nonpoint sources that are regulated under the NPDES program. Stormwater is classified as a point source when it is regulated through the NPDES Stormwater Program. The goal of the NPDES nonpoint source regulations is to improve the quality of stormwater discharged to receiving waters to the maximum extent practicable. The RWQCBs in California are responsible for implementing the NPDES permit program.

National Flood Insurance Act

The Federal Emergency Management Agency (FEMA) is tasked with responding to, planning for, recovering from and mitigating against disasters. The Federal Insurance and Mitigation Administration within FEMA is responsible for administering the National Flood Insurance Program (NFIP) and administering programs that aid with mitigating future damage from natural hazards.

FEMA prepares Flood Insurance Rate Maps (FIRMs) that delineate the regulatory floodplain to assist local governments with land use planning and floodplain management decisions needed to meet the requirements of NFIP. Floodplains are divided into flood hazard areas, which are areas designated per their potential for flooding, as delineated on FIRMs. Special Flood Hazard Areas are the areas identified as having a 1 percent chance of flooding in each year (otherwise known as the 100-year flood). In general, the NFIP mandates that development is not to proceed within the regulatory 100-year floodplain if the development is expected to increase flood elevation by 1 foot or more. FEMA requires that urban areas have flood protection levels that withstand a 100-year flood event.

STATE

California Porter-Cologne Act

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and each of the nine RWQCBs the authority to protect water quality and implements many of California's responsibilities under the CWA. The applicable RWQCBs for the plan area are the Central Valley RWQCB and Lahontan RWQCB. The SWRCB, Central Valley RWQCB, and Lahontan RWQCB have the authority and responsibility to adopt plans and policies, regulate discharges to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substances, sewage, or oil or petroleum products.

Under the Porter-Cologne Act, each RWQCB must formulate and adopt a water quality control plan (known as a "Basin Plan") for its region. The Basin Plans within the plan area include the Central Valley RWQCB Basin Plan and the Lahontan RWQCB Basin Plan. Basin Plans provide a comprehensive list of waterbodies within the region and detailed language about applicable Water Quality Objectives (WQOs). The Basin Plans recognize natural water quality, existing and potential beneficial uses, and water quality issues associated with human activities. Through these Basin Plans, the Central Valley RWQCB and Lahontan RWQCB execute their regulatory authority to enforce the implementation of TMDLs, and to ensure compliance with surface WQOs. The Basin Plans include both narrative and numerical WQOs designed to provide protection for all designated and potential beneficial uses in all its principal streams and tributaries. Applicable beneficial uses include municipal and domestic water supply, irrigation, non-contact and contact water recreation, groundwater recharge, freshwater replenishment, hydroelectric power generation, and preservation and enhancement of wildlife, fish, and other aquatic resources.

The Central Valley RWQCB and Lahontan RWQCB also administer the adoption of waste discharge requirements, manage groundwater quality, and adopt projects within their boundaries under the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit).

NPDES Construction General Permit for Stormwater Discharges Associated with Construction Activity

The SWRCB adopted the statewide NPDES General Permit in August 1999. The state requires that projects disturbing more than 1 acre of land during construction file a Notice of Intent with the applicable RWQCB. Construction activities subject to the General Permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non stormwater discharges to storm sewer systems and other waters. A stormwater pollution prevention plan (SWPPP) must be developed and implemented for each site covered by the permit. The SWPPP must include best management plans (BMPs) designed to prevent construction pollutants from contacting stormwater and keep products of erosion from moving off-site into receiving waters throughout the construction and life of the project; the BMPs must address source control and, if necessary, pollutant control.

NPDES Stormwater Permit for Discharges from Small Municipal Separate Storm Sewer Systems

The Municipal Stormwater Permitting Program regulates stormwater discharges from municipal separate storm sewer systems (MS4s). Stormwater is runoff from rain or snow melt that runs off surfaces such as rooftops, paved streets, highways or parking lots and can carry with it pollutants such as oil, pesticides, herbicides, sediment, trash, bacteria, and metals. The runoff can then drain directly into a local stream, lake, or bay. Often, the runoff drains into storm drains that eventually drain untreated into a local waterbody. CWA Section 402 NPDES MS4 Phase I and Phase II permits cover all jurisdictions as well as large institutional users and require agencies and development to implement stormwater management plans. Stormwater management plans require implementation of site design control measures, which can include conserving natural areas, protecting slopes and channels, minimizing impervious surfaces, the use of vegetated swales and buffers, grass median strips, detention basins, ponds or constructed wetlands, infiltration basins, and settlement ponds.

California Water Code

The California Water Code is enforced by the California Department of Water Resources (DWR). The mission of DWR is "to manage the water resources of California in cooperation with other agencies, to benefit the State's people, and to protect, restore, and enhance the natural and human environments." DWR is responsible for promoting California's general welfare by ensuring beneficial water use and development statewide.

Groundwater Management

Groundwater Management is outlined in the California Water Code, Division 6, Part 2.75, Chapters 1-5, Sections 10750 through 10755.4. The Groundwater Management Act was first introduced in 1992 as AB 3030,and has since been modified by SB 1938 in 2002, AB 359 in 2011, and the Sustainable Groundwater Management Act in 2014, which is outlined in the California Water Code, Division 6, Part 2.74, Chapter 1, Section 10720 (SB 1168, SB 1319, and AB 1739). The intent of the act is to encourage local agencies to work cooperatively to manage groundwater resources within their jurisdictions and to provide a methodology for developing a groundwater management plan (GMP).

SGMA became law on January 1, 2015, and applies to all groundwater basins in the state (Water Code Section 10720 through 10737.8). By enacting SGMA, the legislature intended to provide local agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater within their jurisdiction (Water Code Section 10720.1). Pursuant to SGMA, any local agency that has water supply, water management or land use responsibilities within a groundwater basin may elect to be a "groundwater sustainability agency" for that basin (Water Code Section 10723). Groundwater sustainability agencies (GSAs) within the plan area include the Sacramento Groundwater Authority, the Sacramento Central Groundwater Authority, the West Placer GSA, Northern Delta GSA, Reclamation District 1001, South Sutter Water District, Sutter County GSA, Yolo Subbasin Groundwater Agency, and the Yuba Water Agency. SGMA requires local governments and water agencies in California's high- and medium-high priority groundwater basins, as defined by DWR, to form GMPs. GMPs in the plan area of the 2025 Blueprint include the North American Subbasin GSP, Olympic Valley GMPs, and the Yuba County Water Agency (YCWA) GMPs. The

five GSAs also recently published the North American Subbasin GSP in 2021, and in Yolo County, the Yolo Subbasin GSP was published in 2022.

State Plan of Flood Control

As defined in Section 9110(f) of the California Water Code, "'State Plan of Flood Control' means the state and federal flood control works, lands, programs, plans, policies, conditions, and mode of maintenance and operations of the Sacramento River Flood Control Project described in Section 8350, and of flood control projects in the Sacramento River and San Joaquin River watersheds authorized pursuant to Article 2 (commencing with Section 12648) of Chapter 2 of Part 6 of Division 6 for which the board or the department has provided the assurances of nonfederal cooperation to the United States, and those facilities identified in Section 8361."

The State Plan of Flood Control encompasses a wide network of facilities, which range from major structures such as levees, drainage pumping plants, drop structures, dams and reservoirs, and major channel improvements, to minor components such as stream gauges, pipes, and bridges.

State Implementation Policy

The State Implementation Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California of 2005 addresses a gap in water quality standards covering priority toxic pollutants. It established the policy for development of new standards for a variety of toxic pollutants, as required by the CWA and applies to discharges of toxic pollutants into California's inland surface waters, enclosed bays, and estuaries subject to regulation under the Porter-Cologne Water Quality Control Act of 1969 (Water Code Section 13000 et seq.) and the CWA. Such regulation may occur through the issuance of NPDES permits, the issuance or waiver of waste discharge requirements, or other regulatory approaches.

Assembly Bill 162

AB 162 requires local governments to consider flood risks in their general plans (after January 1, 2009), including:

- annual review of areas covered by the general plan that are subject to flooding as identified by FEMA or DWR;
- include flood hazards in the safety element of their general plan, with goals, policies, and objectives for the protection of the community;
- for communities/counties within the Central Valley, submit the safety element to the Central Valley Flood Protection Board (CVFPB) for review; and
- consider flood risk in evaluating available land suitable for urban development if the flood protection infrastructure required for development would be impractical due to cost or other considerations.

California Building Code

Title 24 of the California Building Code (CBC) includes flood provisions that meet or exceed the minimum requirements of the NFIP for buildings and structures. In addition to these established provisions, the California Building Standards Commission adopted regulations for new construction, changes of use and substantial improvements, and restoration of substantial damage to certain building types in the Central Valley Flood Protection Plan (CVFPP) area where flood levels are anticipated to exceed 3 feet for the 200-year flood event. These requirements are consistent with FEMA requirements for non-residential development in a 100-year floodplain.

California Green Building Standards Code

Chapters 4 and 5 of the California Green Building Standards Code (CALGreen) include mandatory measures for residential and nonresidential development, respectively. For residential projects that disturb less than 1 acre and are not part of a larger common plan of development, Section 4.106.2 requires that stormwater drainage during construction be managed through use of on-site retention basins and filtration systems where stormwater is conveyed to a public drainage system, and/or via compliance with a stormwater management ordinance. Section 5.106.1 requires newly constructed nonresidential projects and additions of less than 1 acre to prevent the pollution of

stormwater runoff because of construction through compliance with a local ordinance or implementing BMPs that address soil loss and good housekeeping to manage equipment, materials, and wastes.

Central Valley Flood Protection Act

The Central Valley Flood Protection Act of 2008 establishes the 200-year flood event as the minimum level of protection for urban and urbanizing areas. As part of the state's FloodSAFE program, those urban and urbanizing areas protected by flood control project levees must receive protection from the 200-year flood event level by 2025. The DWR and CVFPB collaborated with local governments and planning agencies to prepare the 2012 CVFPP, which the CVFPB adopted on June 29, 2012. The objective of the 2012 CVFPP is to create a system-wide approach to flood management and protection improvements for the Central Valley and San Joaquin Valley. The Central Valley Flood Protection Act calls for updates to the CVFPP every 5 years, and the 2022 CVFPP is the most recent document. The 2022 CVFPP serves as California's strategic and financial blueprint to improve flood risk management in the Central Valley and focuses on flood system climate resiliency; accountability and adaptation through performance tracking; and strategic alignment with other state water management planning efforts. Regionally, the Central Valley Flood Protection Act of 2008 requires that land use agencies use the 200-year flood event to establish minimum flood protection required for urban and urbanizing areas.

Integrated Regional Water Management Plans

An Integrated Regional Water Management Plan (IRWMP) is a comprehensive planning document to encourage regional strategies for management of water resources. According to the rules developed in DWR's Region Acceptance Program, stakeholders within a region may apply to become an IRWM region. An adopted IRWMP is a prerequisite for achieving grant funds that are distributed by DWR. The following IRWMPs have been developed in the plan area:

- IRWM Region No. 1 - American River Basin,
- IRWM Region No. 6 – Cosumnes, American, Bear, Yuba,
- IRWM Region No. 22 - North Sacramento Valley,
- IRWM Region No. 34 – Tahoe-Sierra,
- IRWM Region No .45 - Westside (Yolo, Solano, Napa, Lake, Colusa), and
- IRWM Region No. 46 - Yuba County.

The only portion of the plan area that is not included in an IRWMP is the southwestern "panhandle" of Sacramento County.

LOCAL

Municipal and County Flood Control and Stormwater Management

Local cities, counties, and flood control agencies in the plan area are responsible for designing, constructing, and maintaining local flood management facilities, as well as evaluating flood hazards of projects in their jurisdictions. City and county codes and ordinances are required to meet FEMA flood insurance and state flood protection regulations intended to limit flood risk in order to be eligible for FEMA flood insurance. In addition, each jurisdiction must conform to FEMA flood management requirements as well as state requirements for continued participation in the NFIP to be eligible for FEMA flood insurance, applicable project funding, and post-flood assistance.

Cities and counties implement drainage and stormwater management manuals that are intended to provide specific hydrology and hydraulic criteria for a region. These manuals provide consistent, specific guidance and requirements for stormwater management, including regulation of the development process, to achieve stormwater management objectives. Each individual manual provides criteria for how increases in runoff and stormwater volume due to development must be mitigated. In general, all increases in runoff must be appropriately mitigated back to existing peak flows. Some jurisdictions such as Placer County require more stringent mitigation where the flows must be

mitigated to less than existing conditions. Flows may be reduced through the use of a combination of low impact development (LID) techniques and detention/retention basins. The drainage or stormwater management plan of the city or county have applicable policies, programs, and mitigation measures for construction projects.

General Plans

Local planning policies related to hydrology and water quality are also established in each jurisdiction's general plan. In general, jurisdictions have policies in place that establish objectives and policies related to flood protection and safety, water quality, water conservation, and wastewater runoff. The Conservation, Open Space, and Safety elements of general plans are typically the most relevant to hydrology and water quality:

- The Conservation Element applies to conservation, development, and use of natural resources (e.g., soils, forests, rivers and other water bodies, and harbors) and may also cover watershed protection, land or water reclamation, prevention or control of pollution in streams and other waters, regulation of land uses along stream channels and in other areas required to implement the general plan (e.g., buffer areas), control or correction of soil erosion, and flood control.
- The Open Space Element applies to preservation of natural resources, including fish and wildlife habitat, rivers, streams, bays and estuaries, and open space.
- The Safety Element applies to potential risk of death, injuries, property damage, and economic and social impacts resulting from floods and other hazards. Other locally relevant safety issues, such as emergency response, may also be included.

Local Flood Control Agencies

The regulatory agencies responsible for local flood management, control, and maintenance in the plan area include the Placer County Flood Control and Water Conservation District; Sacramento Area Flood Control Agency (SAFCA); Sacramento County Department of Water Resources; American River Flood Control District; West Sacramento Flood Control Agency; Sutter County Flood Control and Water Conservation District; American River Flood Control District; Yolo County Flood Control and Water Conservation District; and YCWA. In addition to these flood management agencies, local cities and counties in the SACOG region are also responsible for developing and enforcing local drainage standards.

3.9.2 Environmental Setting

HYDROLOGY AND DRAINAGE

Regional Watersheds and Hydrology

There are a total of eight watersheds in the plan area: American River, Bear River, Cache Creek, Cosumnes River, Feather River, Putah Creek, Sacramento River, and Yuba River (Figure 3.9-1). These watersheds and their major surface waters, including average annual flows, are summarized in Table 3.9-1. A watershed is an area of land that drains to a common outlet, and all of the land that drains water into the outflow point is within the watershed for that outflow location. A watershed generally consists of surface water, such as lakes, streams, reservoirs, wetlands, and the underlying groundwater basins; large watersheds can contain many smaller watersheds. Ultimately, most of the watersheds in the Central Valley drain to the Sacramento-San Joaquin River Delta. The northeast corner of the plan area contains the Truckee River watershed, which begins north of Lake Tahoe and terminates outside California at Pyramid Lake in Nevada.

Table 3.9-1 Major Rivers and Creeks in the Plan Area

Watershed and Watercourse	Annual Average Flows (cfs)	Outlet
North Fork American Watershed		
North Fork American River	431	Main Branch American River
Middle Fork American River	55	Main Branch American River
Rubicon River	24	Middle Fork American River
South Fork American Watershed		
South Fork American River	797	Main Branch American River
Silver Creek	26	South Fork American River
Silver Fork of the South Fork American River	20	South Fork American River
Lower American Watershed		
Arcade Creek	26	Sacramento River
Main Branch American River	2,266	Sacramento River
Upper Bear Watershed		
Bear River	231	Feather River
Upper Cache Watershed		
Cache Creek	333	Sacramento River/Yolo Bypass
Sacramento - Stone Corral Watershed		
Sacramento River	11,510	Sacramento-San Joaquin Delta
Upper Yuba Watershed		
Yuba River	984	Feather River
Honcut Headwaters - Lower Feather Watershed		
Feather River	2,400	Sacramento River
Upper Consumnes Watershed		
Cosumnes River	295	Mokelumne River
Upper Mokelumne Watershed		
Mokelumne River	231	Sacramento River
Lower Sacramento Watershed		
Laguna Creek	8	Sacramento River
Sacramento River	13,360	Sacramento-San Joaquin Delta
Upper Putah Watershed		
Putah Creek	205	Sacramento River/Yolo Bypass
Truckee River Watershed		
Truckee River	190	Pyramid Lake

Source: Compiled by SACOG based on USGS 2025.

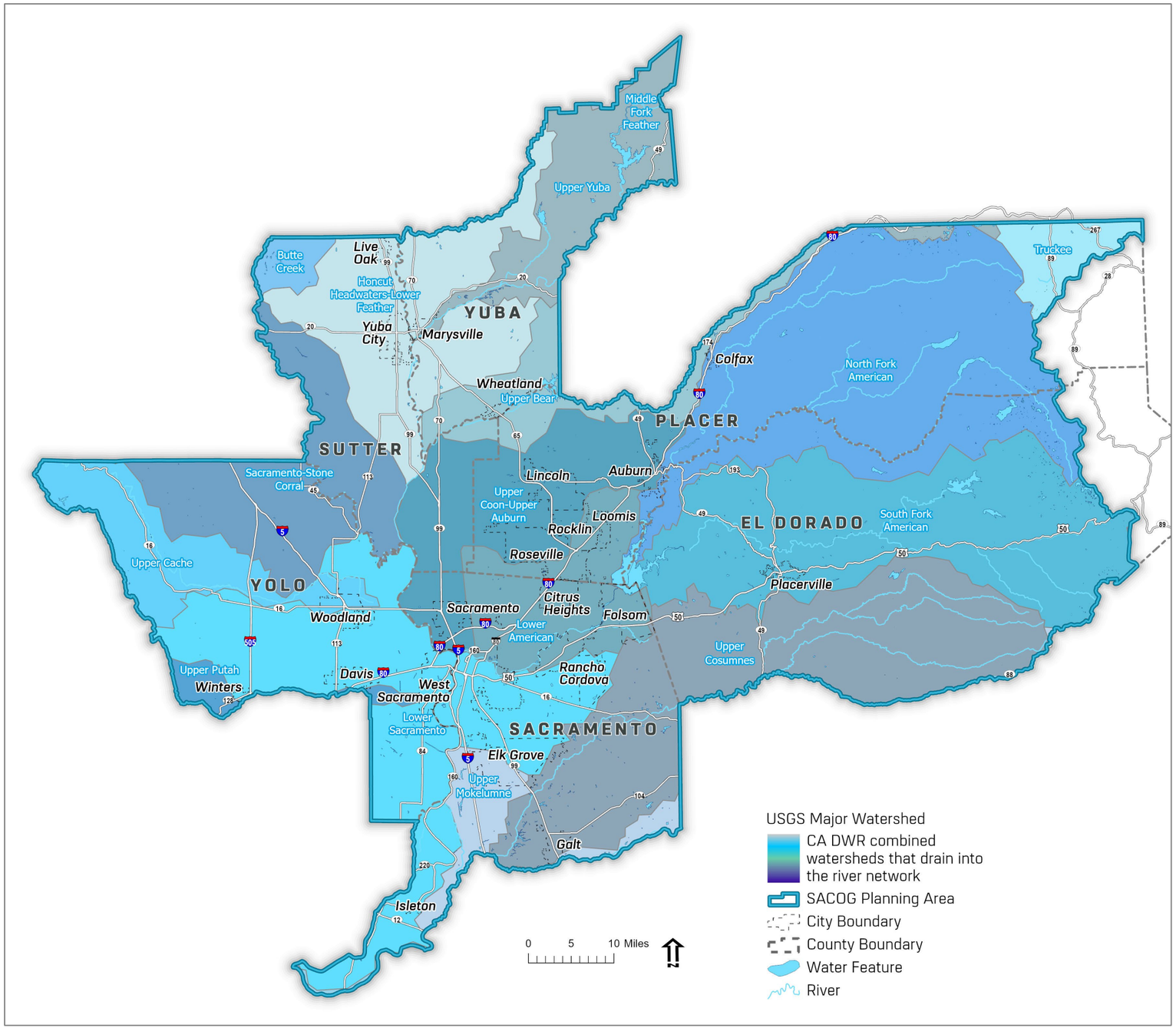
The American River watershed is the largest watersheds in the plan area and overlies Placer, El Dorado, and Sacramento counties. This watershed originates in the high Sierra Nevada, west of Lake Tahoe, and drains west until it ultimately discharges into the Sacramento River near the City of Sacramento. Major rivers and tributaries draining the watershed include the North, Middle, and South Forks of the American River; the Rubicon River, and Silver Fork Creek. Several major reservoirs in this watershed provide water storage and flood control, including Folsom Lake, Lake Natoma, Lake Clementine, Hell Hole Reservoir, Stumpy Meadows Reservoir, Caples Lake, Silver Lake, Loon Lake, Union Valley Reservoir, and Ice House Reservoir.

Stormwater Drainage

Stormwater drainage is provided by municipal stormwater systems for cities and county stormwater systems for unincorporated areas. Stormwater drainage is also naturally provided by undeveloped open space areas, which allow permeation of water directly into the soils and groundwater table beneath. The volume and quality of stormwater drainage can be affected by the continuing development and intensification of land uses and land uses type. For example, stormwater drainage increases as impervious surfaces such as new paved areas, building rooftops, and parking lots are developed; and stormwater quality is affected by land use patterns that include urban runoff that can be contaminated with materials such as oil and grease, metals, bacteria, trash, and chemicals used in landscaping (e.g., nutrients, herbicides, pesticides, and irrigation runoff). During initial storm events and non-stormwater events, such as regular irrigation of landscaping and car washing, runoff is transported to stormwater drainage systems, where it then is discharged into rivers, agricultural ditches, sloughs, and channels.

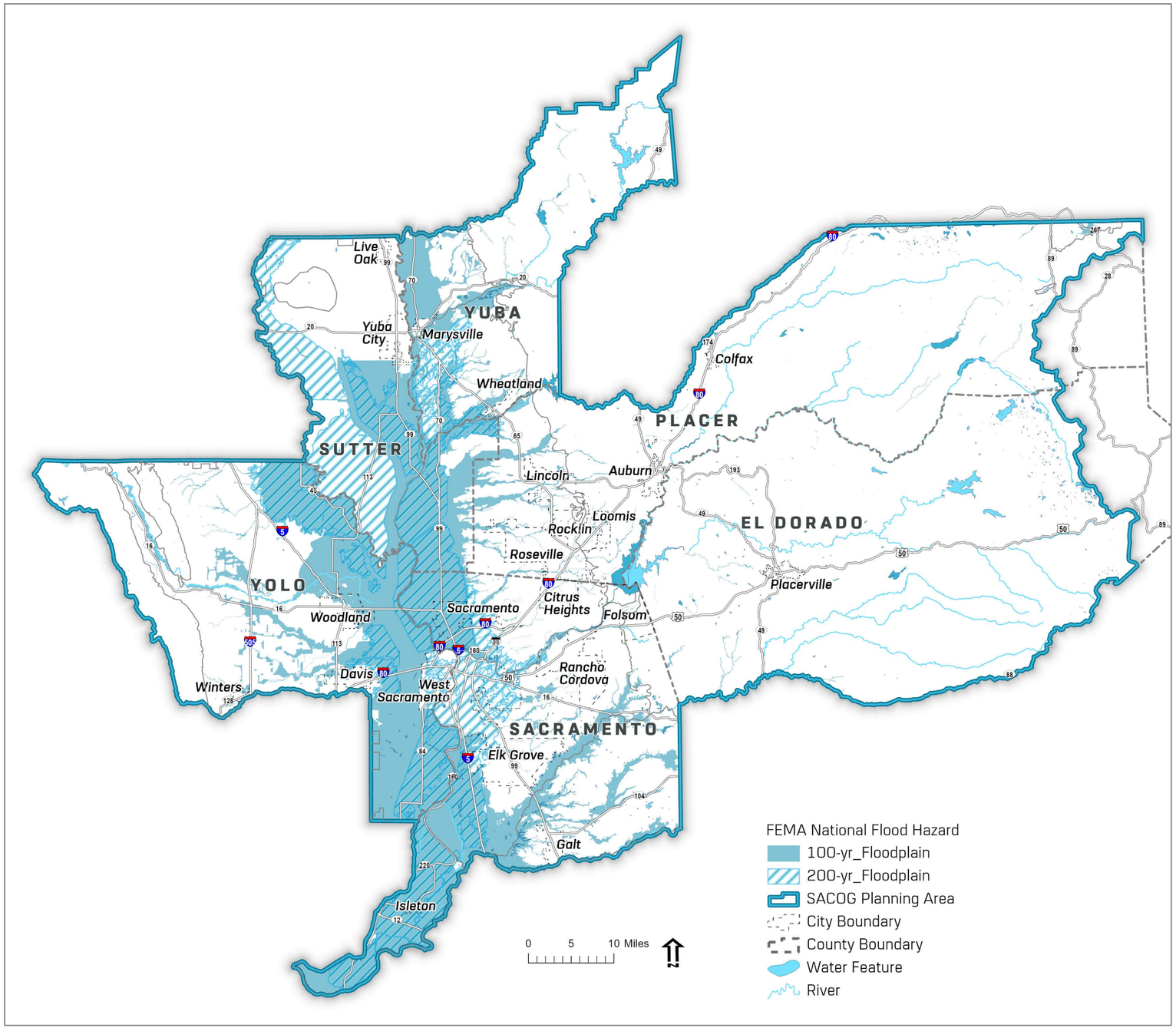
Flood Conditions

Flooding occurs during large-scale or excessive rainfall events or when structures such as levees and dams fail. Parts of the plan area are located within the 100- and 200-year floodplains, as shown in Figure 3.9-2. Hazards related to flooding can include the erosion of existing infrastructure, damage to buildings, injury and loss of human and animal lives, destruction of agricultural crops, contamination of groundwater, and the spread of waterborne diseases. Flooding can also contribute to mudslides and slope instability. Due to the historic likelihood of flood hazards, a system of flow bypasses, dams, levees, and reservoirs helps to control flooding within the SACOG region, with the most important flood protection features being the Yolo Bypass and the Sutter Bypass. These function as flood basins and divert floodwaters away from populated areas when the Sacramento River, Putah Creek, and Cache Creek water levels rise. In addition, the Folsom, Natoma, Englebright, Narrows, Sly Park, Ice House, Camp Far West, North Fork, Union Valley, and New Bullard's Bar dams provide flood protection by regulating watercourses during wet periods. Areas susceptible to dam failure are depicted in Figure 3.9-3. Levee locations are depicted in Figure 3.9-4.



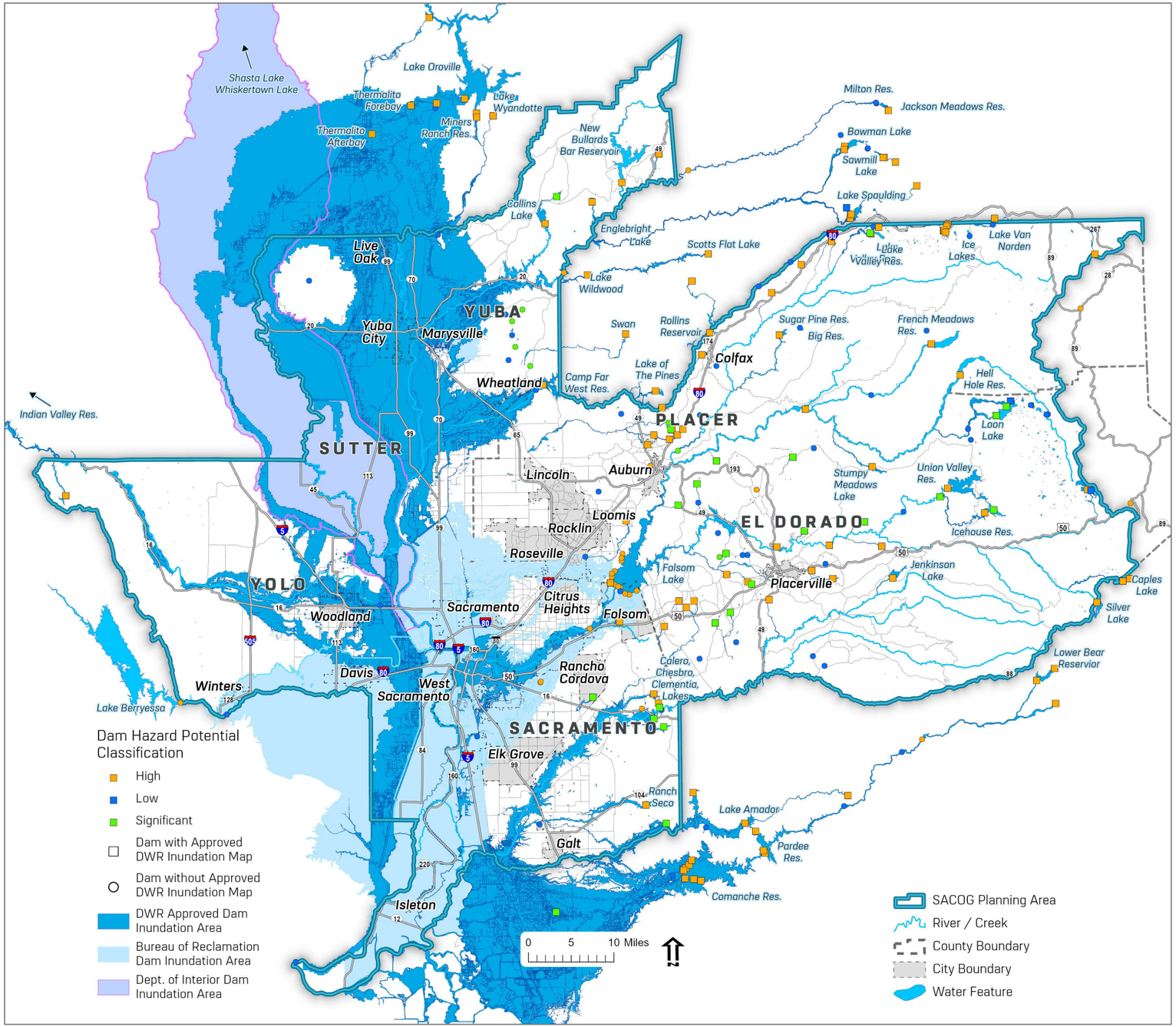
Source: Prepared by SACOG in 2025.

Figure 3.9-1 Major Watersheds in the Plan Area



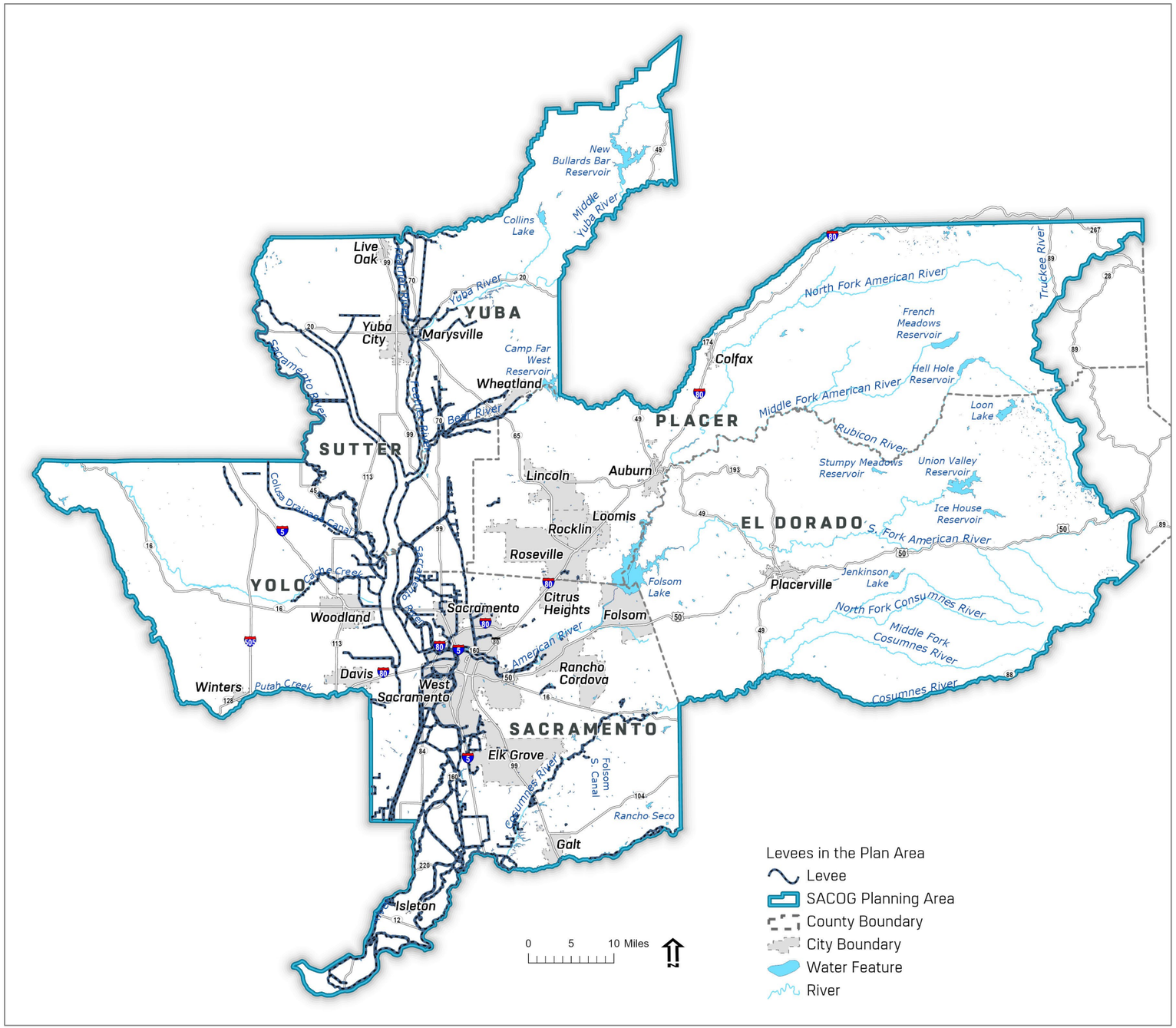
Source: Prepared by SACOG in 2025.

Figure 3.9-2 Flood Hazards in the Plan Area



Source: Prepared by SACOG in 2025.

Figure 3.9-3 Dam Failure Inundation Areas in the Plan Area



Source: Prepared by SACOG in 2025.

Figure 3.9-4 Levees in the Plan Area

Tsunamis and Seiches

A tsunami is a catastrophically large ocean wave or waves typically caused by a submarine earthquake, volcanic eruption, or coastal landslide, which vertically displaces the water column and propagates outward from the location of origin. The California Department of Conservation includes web-based maps showing areas in the state that are at risk of tsunami; the plan area is located outside of the areas at risk of experiencing a tsunami (DOC 2025). Seiches are large waves in an enclosed body of water, such as a lake, bay, or reservoir, that are typically caused by strong ground motion from seismic events, winds, volcanic eruptions, large landslides, and sometimes local basin reflection of tsunami waves. For example, enclosed or partially enclosed bodies of water such as Folsom Lake are potentially susceptible to seiche. As discussed in greater detail in Section 3.6, "Geology, Soils, and Paleontological Resources," the plan area is located in a region of California that does not have many faults and is generally not considered to be very geologically active. Therefore, the plan area does not have a high potential for a seiche.

Groundwater Hydrology

Groundwater basins are created when surface water permeates through soils and accumulates in aquifers underground. Groundwater levels fluctuate depending on the amount of rainfall and groundwater extraction in an area, especially when groundwater use increases during dry years or during a drought. The plan area overlies 13 groundwater basins. Ten groundwater basins are located in the Sacramento hydrologic region: North Yuba, South Yuba, Butte, Sutter, North American, South American, Solano, Yolo, Colusa, and Capay Valley; one groundwater basin in the San Joaquin hydrologic region: Cosumnes; and two groundwater basins in the North Lahontan hydrologic region: Martis Valley and Olympic Valley. Physical properties of these groundwater basins, such as size and overall basin priority are further detailed in Table 3.9-2. The locations of these basins are shown in Figure 3.9-5. Basin prioritization is determined by DWR, which identifies, evaluates, and determines the need for additional groundwater monitoring using eight criteria: overlying population; rate of current and projected growth of the overlying population; number of public supply wells; total wells that draw from the basin; overlying irrigated acreage; reliance on groundwater as the primary source of water; documented groundwater overdrafting; subsidence (the gradual sinking of land due to overdrafting); saltwater intrusion in coastal areas due to overdraft; or other water quality degradation.

Table 3.9-2 Groundwater Basin Physical Properties

Groundwater Basin	Size (square miles)	Hydrologic Region	Overall Basin Priority
North Yuba	95	Sacramento	Medium
South Yuba	170	Sacramento	High
Butte	415	Sacramento	Medium
Sutter	447	Sacramento	Medium
North American	535	Sacramento	High
South American	388	Sacramento	High
Solano	554	Sacramento	Medium
Yolo	845	Sacramento	High
Colusa	1,131	Sacramento	High
Capay Valley	39	Sacramento	High
Cosumnes	329	San Joaquin	Medium
Martis Valley	57	North Lahontan	Very Low
Olympic Valley	1	North Lahontan	Very Low

Source: DWR 2025.

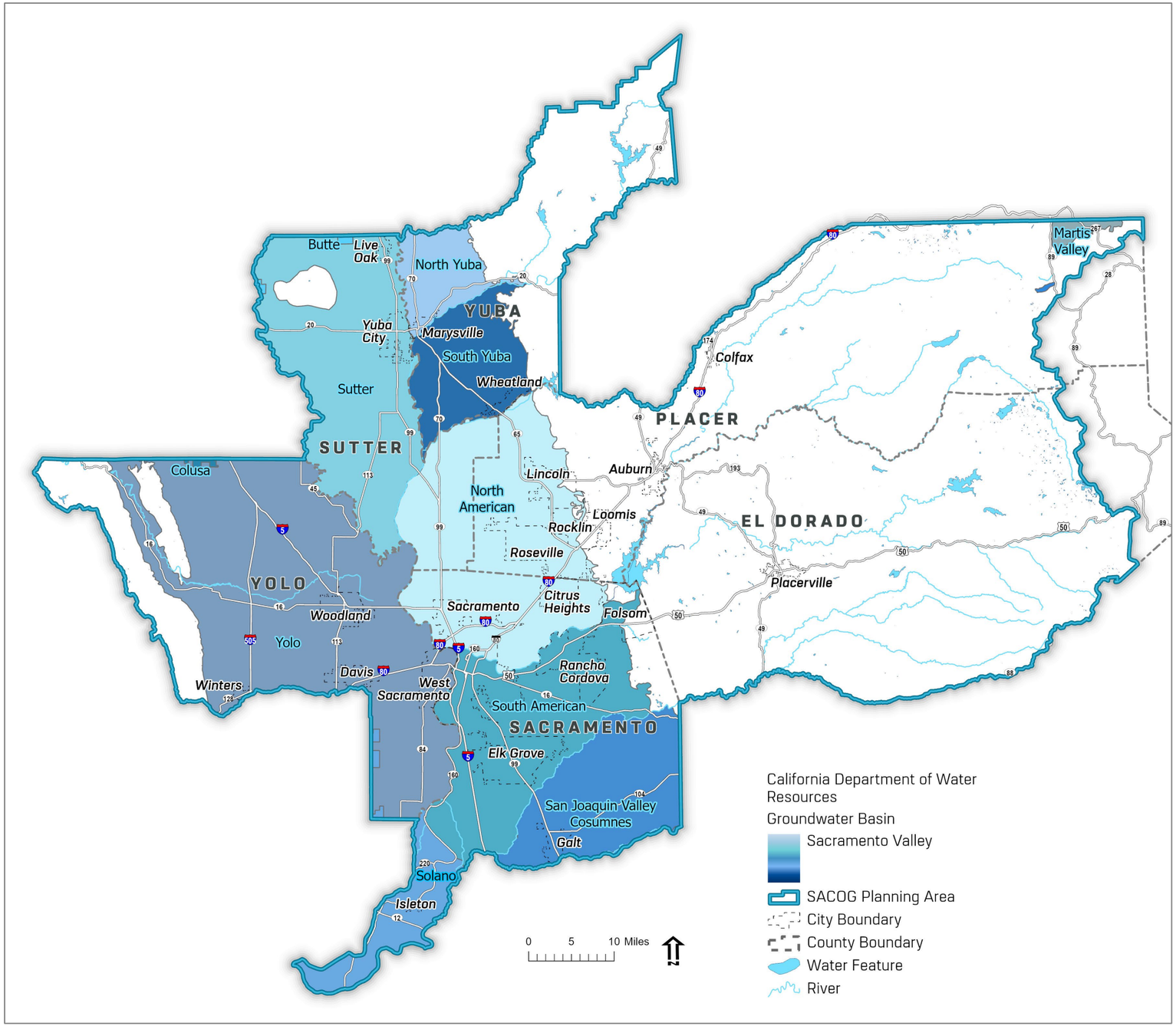
The Sacramento Central Groundwater Authority adopted a GSP in October 2021 for the South American Subbasin that includes ongoing monitoring and annual reporting; public engagement and outreach; coordination among agencies; shallow well protection and monitoring; coordination with land use agencies and water supply agencies to promote consistency with the GSP and climate change projection, and the preparation of a 5-year update to be submitted in 2027.

The Olympic Valley GMP was last updated in 2007. A review report was completed for Olympic Valley in January 2023, which documents that in 2016 the basins in Olympic Valley underwent a standardized ranking process by DWR and received a Very Low priority ranking based on existing population; estimated population growth; well supply and number of wells; irrigated acres; groundwater reliance; impacts from declining water levels, degradation, and subsidence; and habitat (McGinley & Associates 2023).

The YCWA GSP was adopted in December 2024 and last revised in January 2025. It includes the North Yuba Subbasin and the South Yuba Subbasin, which have Medium Priority and High Priority, respectively (DWR 2025). The Yuba County GSP used population growth estimates from the County's General Plan, which projects that by 2030 there will be an additional 100,000 residents (Cordua Irrigation District and YCWA 2024). Yuba County's regional growth is predicted to transition agricultural land to urban land. To protect the County's agriculture and forestry resources while also accommodating growth, the County established a Valley Growth Boundary (seen in Figure 2-15 of the YCWA GSP).

The North American Subbasin GSP covers portions of Placer County, Sacramento County, and Sutter County, but most of the urban development is located within the Sacramento County and the southeastern portion of Placer County. The North American Subbasin is designated as having High Priority (DWR 2025) and expected to increase in population by 200,000 people by 2030, with a particular increase in urban development extending the existing urbanized areas north and west (GEI Consultants 2021: 3-9).

The Yolo County Subbasin GSP was adopted in January 2022 and covers a portion of the Sacramento Valley and includes the cities of West Sacramento, Davis, Winters, and Woodland (GEI Consultants 2022). The Yolo County Subbasin is designated as having a High Priority basin prioritization and has experienced a 2.7 percent growth rate change from 2020 to 2024 (US Department of Finance 2024).



Source: Prepared by SACOG in 2025.

Figure 3.9-5 Groundwater Basins in the Plan Area

WATER QUALITY

Surface Water Quality

Land uses in the plan area include residential, commercial, agricultural land, and open space uses such as grazing, timber harvesting, mining, and recreation. These land uses can contribute to pollutant discharges that affect surface water quality, such as sediment, hydrocarbons, metals, pesticides, nutrients, bacteria, and trash waste. Several of the larger surface water bodies in the plan area are listed as "impaired" according to Section 303(d) of the CWA. Impaired waters generally result from pollutant discharges from point and non-point sources. Point source pollution originates from a single source, or point, such as discharges of treated effluent from municipal wastewater treatment plants and wastewater discharges from industrial and commercial facilities (NOAA 2016). Non-point source pollution is more difficult to pinpoint, but this can occur as a result of stormwater runoff from urban, suburban, construction, and agricultural areas (NOAA 2016). Figure 3.9-6 shows impaired waterways in the plan area and Table 3.9-3 summarizes the sources of these water quality impairments for the plan area.

Table 3.9-3 CWA Section 303(d) Listed Impairments in the Plan Area

Name	Contaminant	Source
Loon Lake	Mercury	Source Unknown
Camp Far West Reservoir	Mercury	Source Unknown
Lake Combie	Mercury	Source Unknown
Rollins Reservoir	Mercury	Source Unknown
Hell Hole Reservoir	Mercury	Source Unknown
Meadows Slough (Sacramento County)	Mercury	Source Unknown
Sutter Bypass	Mercury, Dissolved Oxygen	Source Unknown
Lake Natoma	Mercury, Pathogens	Source Unknown
Merle Collins Reservoir	Mercury	Source Unknown
New Bullards Bar Reservoir	Mercury	Source Unknown
Slab Creek Reservoir (El Dorado County)	Mercury	Source Unknown
Sly Creek Reservoir (Butte County)	Mercury	Source Unknown
Sacramento-San Joaquin Delta	Chlordane, DDT, Dieldrin, Dioxin, Furan Compounds, Mercury, Polychlorinated Biphenyls (PCBs), Non-Native Aquatic Plants, Selenium	Source Unknown
Folsom Lake	Mercury	Source Unknown
Delta Waterways (western portion)	Conductivity, Arsenic, Chlordane, DDT, Dieldrin, Mercury, Pesticides, Polychlorinated Biphenyls (PCBs), Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems), Non-Native Aquatic Plants, Toxicity	Agriculture, Industrial Point Source Discharge, Municipal Point Source Discharges, Urban Runoff/storm Sewers
Delta Waterways (northwestern portion)	Conductivity, DDT, Mercury, Pesticides, Chlorpyrifos, Diazinon, Non-Native Aquatic Plants, Toxicity	Agriculture, Municipal Point Source Discharges, Urban Runoff/storm Sewers
Delta Waterways (eastern portion)	DDT, Mercury, Pesticides, Non-Native Aquatic Plants	Source Unknown

Name	Contaminant	Source
Delta Waterways (northern portion)	Chlordane, DDT, Dieldrin, Mercury, Polychlorinated Biphenyls (PCBs), Pesticides, Non-Native Aquatic Plants	Agriculture, Highway/road/bridge Runoff, Industrial Point Source Discharge, Municipal Point Source Discharges, Urban Runoff/storm Sewers
Delta Waterways (central portion)	DDT, Mercury, Pesticides, Chlorpyrifos, Non-Native Aquatic Plants	Agriculture, Industrial Point Source Discharge, Municipal Point Source Discharges, Urban Runoff/storm Sewers
Davis Creek Reservoir	Mercury	Source Unknown
Englebright Lake	Mercury	Source Unknown
Lake Clementine (Placer County)	Mercury	Source Unknown
Lake Solano	Mercury	Source Unknown
Butte Creek (Butte County)	pH, Mercury	Source Unknown
Sacramento River (Red Bluff to Knights Landing)	DDT, Dieldrin, Dissolved Oxygen, Mercury, Polychlorinated Biphenyls (PCBs), Toxicity	Source Unknown
Kaseberg Creek, unnamed southeastern tributary (from Silverado Middle School to Timber Creek Golf Course, Placer County)	Bifenthrin, Cyfluthrin, Cypermethrin. Deltamethrin, Lambda-Cyhalothrin, Toxicity	Source Unknown
Kaseberg Creek, unnamed eastern tributary (from Green Grove Lane to Del Webb Boulevard)	Bifenthrin, Cyfluthrin, Cypermethrin, Lambda-Cyhalothrin, Toxicity	Source Unknown
Kaseberg Creek, unnamed southern tributary (from Baseline Road to Timber Creek Golf Course, Placer County)	Bifenthrin, Cyfluthrin, Cypermethrin, Deltamethrin, Lambda-Cyhalothrin, Toxicity	Source Unknown
Kaseberg Creek (tributary to Pleasant Grove Creek, Placer County)	Bifenthrin, Cyfluthrin, Cypermethrin, Deltamethrin, Lambda-Cyhalothrin, Pyrethroids, Toxicity	Source Unknown
Lower Kaseberg Creek	Bifenthrin, Cyfluthrin, Cypermethrin, Pyrethroids	Source Unknown
Pleasant Grove Creek, unnamed northern tributary (from Mt. Tamalpais Drive to confluence with Pleasant Grove Creek)	Bifenthrin, Cyfluthrin, Cypermethrin. Deltamethrin, Fipronil, Fipronil Sulfone, Imidacloprid, Lambda-Cyhalothrin, Permethrin, Pyrethroids, Toxicity	Source Unknown
Pleasant Grove Creek, South Branch, unnamed southeastern tributary (from east of Sierra View Country Club to confluence with Pleasant Grove Creek, South Branch)	Bifenthrin, Cyfluthrin, Cypermethrin, Toxicity	Source Unknown
Pleasant Grove Creek, unnamed northern tributary (from Greywood Circle to confluence with Pleasant Grove Creek)	Bifenthrin, Cyfluthrin, Cypermethrin, Fipronil, Fipronil Sulfone, Imidacloprid, Malathion, Permethrin, Pyrethroids, Toxicity	Source Unknown
Pleasant Grove Creek	Bifenthrin, Cyfluthrin, Cypermethrin, Deltamethrin, Dissolved Oxygen, Pyrethroids, Toxicity	Source Unknown
Pleasant Grove Creek, South Branch	Bifenthrin, Cyfluthrin, Cypermethrin, Deltamethrin, Dissolved Oxygen, Pyrethroids, Toxicity	Source Unknown
Curry Creek (Placer and Sutter counties)	Pyrethroids, Toxicity	Source Unknown
Morrison Slough	Diazinon	Agriculture
Live Oak Slough	Dissolved Oxygen, Diazinon, Oxyfluorfen	Source Unknown

Name	Contaminant	Source
Sacramento River (Sacramento City Marina to Suisun Marsh Wetlands)	Fipronil, Pyrethroids, Toxicity, Temperature	Source Unknown
Natomas East Main Drainage Canal (i.e., Steelhead Creek, upstream of confluence with Arcade Creek)	Polychlorinated Biphenyls (PCBs)	Source Unknown
Dry Creek (Placer and Sacramento counties)	Pathogens	Source Unknown
Linda Creek	Dissolved Oxygen, Pathogens	Source Unknown
Natomas East Main Drainage Canal (i.e., Steelhead Creek, downstream of confluence with Arcade Creek)	Mercury, Trash, Pathogens,	Source Unknown
Yuba River (Englebright Lake Dam to Lower Feather River)	Copper, Mercury	Source Unknown
Unknown tributary to South Fork Cosumnes River (Amador County)	Dissolved Oxygen	Source Unknown
Lower Mokelumne River (in Delta Waterways, eastern portion)	Mercury, Copper, Dissolved Oxygen, Toxicity, Zinc	Agriculture, Highway/road/bridge Runoff, Industrial Point Source Discharge, Municipal Point Source Discharges, Urban Runoff/storm Sewers
Laguna Creek (Sacramento County)	Benthic Macroinvertebrates Bioassessments, Toxicity	Source Unknown
Main Drainage Canal	Diazinon, Dissolved Oxygen	Agriculture
San Joaquin River (from Delta Waterways to Stockton Ship Channel)	Imidacloprid, Toxicity, Temperature	Source Unknown
Snake River (Butte and Sutter counties)	Chlorpyrifos, Pathogens, Toxicity	Agriculture
Wadsworth Canal	Chlorpyrifos, Diazinon, Pathogens	Agriculture
Strong Ranch Slough	Pyrethroids, Toxicity, Chlorpyrifos, Diazinon	Urban Runoff/storm Sewers
Coon Creek (from confluence of Orr and Dry Creeks to East Side Canal, Placer and Sutter counties)	Ammonia, Pathogens	Source Unknown
Truckee River	Nitrogen, Nitrate, Sedimentation/siltation	Channel Erosion/incision From Upstream Hydromodifications, Highways, Roads, Bridges, Infrastructure
Squaw Creek	Sedimentation/siltation	Impacts From Hydrostructure Flow Regulation/modification, Highway/road/bridge Runoff
Winters Canal (Yolo County)	Diazinon	Agriculture
North Canyon Creek (El Dorado County)	Pathogens, Toxicity	Source Unknown
Yuba River, South Fork (Headwaters to Lake Spaulding)	Copper, Dissolved Oxygen, Mercury, pH	Source Unknown
Martis Creek	Phosphorus	Source Unknown
Tule Canal (Yolo County)	Boron, Pathogens, Salinity	Source Unknown
Oregon Creek (Yuba and Sierra counties)	Copper, Iron	Source Unknown
Willow Slough Bypass (Yolo County)	Chlorpyrifos, Diuron, Malathion, Boron, Pathogens, Selenium, Specific Conductivity, Toxicity	Agriculture

Name	Contaminant	Source
Yankee Slough (Placer and Sutter counties)	Chlorpyrifos, Toxicity	Agriculture
Willow Slough (Yolo County)	Boron, Toxicity	Source Unknown
Simmerly Slough (Yuba County)	Toxicity	Source Unknown
Jack Slough	Diazinon, Dissolved Oxygen, Toxicity	Agriculture
Unnamed Tributary to Alder Creek (Sacramento County)	Bifenthrin, Fipronil, Fipronil Sulfone, Imidacloprid, Pyrethroids	Source Unknown
Beacon Creek (Sacramento County)	Toxicity	Source Unknown
Lower Coon Creek (from Pacific Avenue to Main Canal, Sutter County)	Dissolved Oxygen, Pathogens, Toxicity	Source Unknown
Cherokee Creek (Sierra County)	pH	Source Unknown
Middle Fork Consumnes River (El Dorado County)	Dissolved Oxygen	Source Unknown
Knights Landing Ridge Cut (Yolo County)	Dissolved Oxygen, Salinity	Source Unknown
Natomas Cross Canal (Sutter County)	Mercury	Source Unknown
Gordon Slough (from headwaters and Goodnow Slough to Adams Canal, Yolo County)	Dissolved Oxygen	Source Unknown
Gilsizer Slough (from Yuba City to downstream of Township Road, Sutter County)	Diazinon, Diuron, Dissolved Oxygen, Oxyfluorfen, pH, Toxicity	Agriculture
Davis Creek (downstream from Davis Creek Reservoir, Yolo County)	Mercury	Source Unknown
Davis Creek (upstream from Davis Creek Reservoir, Yolo County)	Mercury	Source Unknown
Duck Slough (in Delta Waterways, northern portion)	Chlorpyrifos	Agriculture
Honcut Creek (Butte and Yuba counties)	Dissolved Oxygen, Pathogens	Source Unknown
Rock Creek (Placer County)	Pathogens	Source Unknown
Colusa Basin Drain	Diazinon, DDT (Dichlorodiphenyltrichloroethane), Dieldrin, Dissolved Oxygen, Guthion, Mercury, Pathogens, Pesticides, Toxicity	Agriculture
Morrison Creek	Benthic Macroinvertebrates Bioassessments, Pentachlorophenol (PCP), Pyrethroids, Toxicity, Diazinon	Urban Runoff/storm Sewers
Elder Creek (Sacramento County)	Benthic Macroinvertebrates Bioassessments, Pyrethroids, Toxicity, Chlorpyrifos, Diazinon	Urban Runoff/storm Sewers
Miners Ravine (Placer County)	Dissolved Oxygen, Pathogens	Source Unknown
South Fork American River (below Slab Creek Reservoir to Folsom Lake)	Mercury	Source Unknown
North Fork American River	Mercury	Source Unknown
Lower Bear River (below Camp Far West Reservoir)	Chlorpyrifos, Aluminum, Copper, Iron, Mercury	Agriculture
Putah Creek (Lake Solano to Putah Creek Sinks; partly in Delta Waterways, northwestern portion)	Mercury	Subsurface (Hardrock) Mining
Elk Grove Creek	Diazinon	Urban Runoff/storm Sewers
Lower Feather River (Lake Oroville Dam to Confluence with Sacramento River)	Chlorpyrifos, Aluminum, Dissolved Oxygen, Mercury, Pesticides, Polychlorinated Biphenyls (PCBs), Toxicity	Agriculture

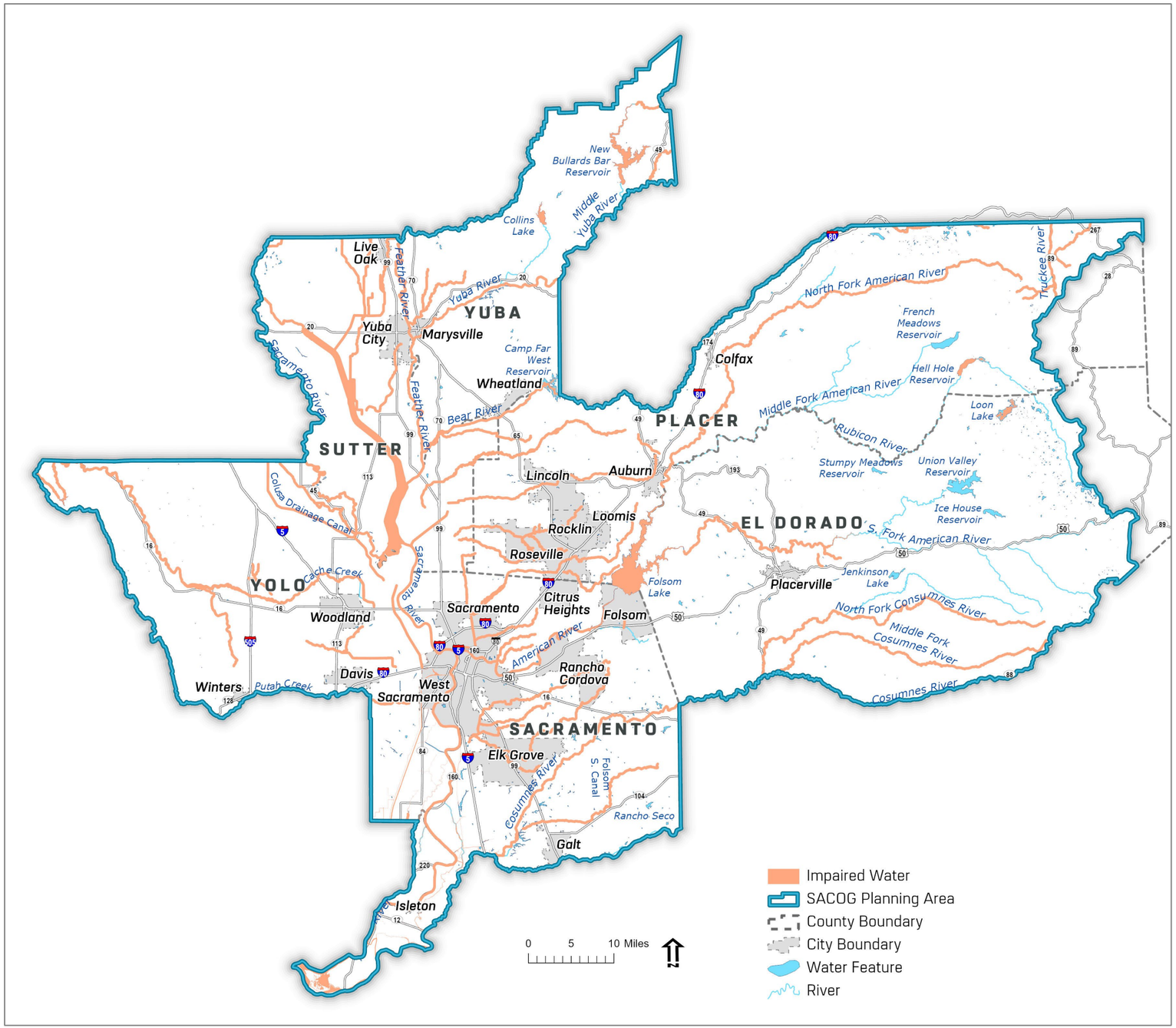
Name	Contaminant	Source
Sycamore Slough (Yolo County)	Dissolved Oxygen	Source Unknown
Sacramento Slough	Dissolved Oxygen, Mercury, Toxicity	Source Unknown
Arcade Creek	Bifenthrin, Copper, Fipronil Sulfone, Malathion, Permethrin, Pyrethroids, Toxicity, Chlorpyrifos, Diazinon	Urban Runoff/storm Sewers
Lower American River (Nimbus Dam to confluence with Sacramento River)	Bifenthrin, Mercury, Pathogens, Polychlorinated Biphenyls (Pcbs), Pyrethroids, Temperature, Toxicity	Source Unknown
Sacramento River (Knights Landing to the Delta)	Chlordane, DDT (Dichlorodiphenyltrichloroethane), Dieldrin, Mercury, Polychlorinated Biphenyls (PCBs), Temperature, Toxicity	Source Unknown
Cache Creek, Lower (Clear Lake Dam to Cache Creek Settling Basin near Yolo Bypass)	Boron, Dissolved Oxygen, pH, Specific Conductivity, Mercury	Subsurface (Hardrock) Mining
Chicken Ranch Slough	Pyrethroids, Toxicity, Chlorpyrifos, Diazinon	Urban Runoff/storm Sewers
Butte Slough	Dichlorvos, Dissolved Oxygen, Propanil, Toxicity	Source Unknown
Norh Fork Cosumnes River	Dissolved Oxygen	Source Unknown
Laguna Creek (tributary to Cosumnes River, Sacramento County)	Dissolved Oxygen, Pathogens, Toxicity	Source Unknown
Auburn Ravine	Pathogens	Source Unknown
Upper Cosumnes River (above Michigan Bar)	Dissolved Oxygen, Non-Native Aquatic Plants	Source Unknown
Lower Cosumnes River (below Michigan Bar; partly in Delta Waterways, eastern portion)	Dissolved Oxygen, Mercury, Non-Native Aquatic Plants, Pathogens, Toxicity	Source Unknown
Coon Hollow Creek (El Dorado County)	DDE (Dichlorodiphenyldichloroethylene), Toxicity	Source Unknown
Upper Bear River (from Lake Combie to Camp Far West Reservoir, Nevada and Placer counties)	Mercury	Source Unknown
Yuba River (confluence of North and Middle Yuba Rivers to Englebright Lake)	Chromium, Mercury	Source Unknown
North Fork Yuba River	Mercury	Source Unknown

Source: Data adapted by SACOG; CALEPA list 303(d) 2024.

Groundwater Quality

The main factors that affect groundwater quality are the source and chemical composition of recharge water, properties of the host sediment, and history of discharge or leakage of pollutants. According to California's Groundwater Update 220 Highlights (Bulletin 118), groundwater from water quality stations shows that there are five contaminants of concern: 1,2,3-trichloropronane (1,2,3-TCP), nitrate as nitrogen, arsenic, uranium, and total dissolved solids (TDS) (DWR 2021: H-33). As they pertain to the plan area, water quality monitoring stations with elevated TDS and uranium concentrations are located in the San Joaquin River hydrologic region; and water quality monitoring stations with elevated 1,2,3-TCP concentrations are located in the San Joaquin River and Sacramento River hydrologic regions (DWR 2021: H-33).

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Source: Prepared by SACOG in 2025.

Figure 3.9-6 Impaired Waterways in the Plan Area

3.9.3 Environmental Analysis

METHODOLOGY

Evaluation of potential hydrologic and water quality impacts is based on a review of federal regulations such as the CWA, NPDES permitting process and requirements, and FEMA's NFIP; state regulations such as the Porter-Cologne Act, CBC, CALGreen, and State Implementation Policy; and local regulations such as general plans, regulatory agencies responsible for local flood control and stormwater management practices, and local groundwater basins plans and sustainability plans. The analysis examines how implementation of the 2025 Blueprint, including components of the projected land use pattern and planned transportation improvements, such as increased impervious surfaces, pollutant sources, and construction activities, may affect existing hydrology and water quality. This includes comparing the 2025 Blueprint to existing hydrologic and water quality conditions of CWA 303(d) impaired water bodies, groundwater basins, flood hazard areas, levee and dam inundation areas, and seiche and tsunami zones.

The analysis is based on the most current data and planning tools, including:

- the CWA Section 303(d) listed water bodies (last updated with the 2018 California Integrated Report);
- the Central Valley RWQCB Basin Plan for the Sacramento River Basin and San Joaquin River Basin, which is updated on a continuing basis and was last revised in 2019; and
- data from FEMA's FIRMs that delineate 100-year flood hazard areas to assist local governments with the land use planning and floodplain management decisions, in accordance with the National Flood Insurance Act, and data from the US Army Corps of Engineers for 200-year flood hazard areas.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the 2025 Blueprint would have a significant adverse effect related to hydrology and water quality if it would:

- violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- 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 on- or off-site;
  - result in flooding on-site or off-site;
  - 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; or
  - impede or redirect flood flows.
- risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones; and/or
- conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

ISSUES NOT DISCUSSED FURTHER

Risk Release of Pollutants Due to Tsunami

As discussed above in Section 3.9.2, "Environmental Setting," the plan area is located outside the areas at risk of experiencing tsunami (DOC 2025). Therefore, buildout of land use and transportation projects in association with the 2025 Blueprint would not be expected to result in an increased risk of releasing pollutants due to tsunami. No impact would occur, and no further analysis is required.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.9-1: Violate Any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Surface or Groundwater Quality

Regional Growth and Land Use Change

The land use changes and development under the regional growth pattern of the 2025 Blueprint would increase the volume of stormwater runoff and regular runoff (i.e., from day-to-day activities such as landscape irrigation and car washing) by increasing the amount of impervious surfaces, such as buildings and paved areas, in previously undeveloped, vacant, or less developed land. Increased development has the potential to increase the impervious areas. It would also increase the occurrence or concentration of activities that would increase the pollutant load of stormwater discharges. For example, additional vehicles would result in increased deposit of heavy metals, oils, and other substances onto roadways, parking lots, and driveways; additional residents would wash cars in driveways releasing detergents and other chemicals into drainages; and various land uses apply pesticides and fertilizers on landscaping, which are washed into drainages and waterways via irrigation and stormwater. Therefore, stormwater runoff and regular runoff resulting from buildout of the 2025 Blueprint are expected to include increased pollutants such as sediments, pesticides, herbicides, fertilizers, oil and grease, nutrients, metals, bacteria, and trash. Increased concentrations of these pollutants would degrade receiving surface waters such as rivers, creeks, and channels, as well as permeating into groundwater. Because of this, development in the plan area would have the potential to cause or contribute to a long-term increase in discharges of urban contaminants into the stormwater drainage system compared to existing conditions.

Water quality protection measures are enforced by the Central Valley RWQCB and Lahontan RWQCB under the NPDES program that was established by the CWA. For projects that would result in less than 1 acre of land disturbance, the NPDES Phase II MS4 General Permit covers all local jurisdictions and large institutional uses and requires the development of an erosion sediment control plan (ESCP). The ESCP must identify potential sources of erosion and control sedimentation associated with projects and include BMPs to prevent erosion and control sedimentation. CALGreen Sections 4.106.2 and 5.106.1 include requirements for the preservation of slopes, management of stormwater drainage, erosion control, and infiltration/retention of runoff onsite to decrease the volume of polluted runoff and increase groundwater recharge. Compliance with these regulatory requirements for projects of less than 1 acre would serve to minimize the degradation of surface and groundwater quality.

For larger projects (i.e., for projects that disturb 1 acre or more of land), the NPDES Construction General Permit requires that a SWPPP be implemented, which also identifies BMPs designed to prevent construction pollutants from contaminating stormwater and keeps products of erosion from moving offsite into receiving waters throughout the construction and life of the 2025 Blueprint. In addition to erosion and sediment controls, BMPs must be in place to keep other construction-related wastes and pollutants out of storm drains. Typical BMPs can include using temporary mulching, seeding, or other stabilization measures to protect uncovered soils; storing materials and equipment to ensure that hazardous spills or leaks do not enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; installing traps, filters, or other devices at drop inlets to prevent oil, grease, trash, and other contaminants from entering storm drains; and using barriers, such as straw wattles or silt fencing, to minimize the amount of uncontrolled runoff that could enter drains or surface water.

NPDES MS4 permittees are also required to develop and enforce ordinances and regulations to reduce the discharge of sediments and other pollutants in stormwater and regular runoff. New development that would introduce 10,000 or more square feet of new impervious surfaces would be required under Provision C.3 of the NPDES program to incorporate LID strategies such as stormwater reuse, on-site infiltration, and evapotranspiration.

As discussed under Section 3.9.1, "Regulatory Setting," the CWA Section 303(d) requires the state to develop a list of impaired water bodies that do not attain water quality objectives after implementation of required levels of treatment available by point source dischargers, such as municipalities and industries. As part of this process, Section 303(d) requires that the state develop a TMDL for each of the listed pollutants, which is the amount of the pollutant that the water body can receive while still complying with water quality objectives. TMDLs are achieved through water quality control plans, such as the Central Valley RWQCB Basin Plan for the Sacramento River Basin and San Joaquin River Basin. A list of CWA Section 303(d) impaired waters is included above in Table 3.9.3. Development proposed in accordance with the 2025 Blueprint would be required to comply with TMDLs through the NPDES permitting process, which would substantially address the potential for buildout of the 2025 Blueprint to contribute additional pollutants to existing Section 303(d)-listed impaired water bodies. Although some development associated with the buildout of the 2025 Blueprint may be located on land that drains to an impaired water body, consistency with NPDES regulations would ensure new development would not result in a net increase of the pollutants for which the impaired waterway(s) are listed. Therefore, development associated with the 2025 Blueprint would not be expected to contribute to violations of water quality standards or otherwise substantially degrade surface or groundwater quality standards. Compliance with these applicable regulatory requirements would ensure that projects and development associated with the 2025 Blueprint would minimize their contribution of pollutants in runoff during construction and operation. Therefore, the regional growth and land use change impact associated with violating water quality standards, waste discharge requirements, or otherwise substantially degrade surface or groundwater quality from implementation of the 2025 Blueprint would be less than significant.

Transportation Network Improvements and Programs

Development of transportation network improvements and programs would include new lane miles of highways, arterials, and expressways. Additional improvements would involve new separated bike routes. These facilities would also have the potential to increase impervious surfaces in the plan area and would require similar drainage control measures as those described above for the anticipated regional growth and land use changes. Other improvements in urbanized locations with established roadway infrastructure, and most maintenance activities, would not substantially change in the drainage patterns or amount of stormwater runoff and non-stormwater runoff pollutants. Once constructed, operational BMPs such as LID design, hydromodification measures, and erosion control and revegetation design, would be required to comply with stormwater discharge permits and local discharge requirements. Similar to regional growth and land use changes discussed above, existing regulations are in place to reduce adverse water quality impacts from construction and operation on receiving surface waters and groundwater.

The construction of transportation improvements could also affect receiving waters and groundwater basins. Potential for water quality degradation during construction of transportation improvements would be addressed through compliance with state and local regulations intended to minimize the potential for exposed soils to generate soil erosion. For example, stormwater runoff from rain or construction activities that travels from paved streets, highways, and parking lots into existing storm drain infrastructure can affect the quality of receiving waters, such as local streams or lakes, and receiving groundwater basins. To address this, transportation development would be required to comply with NPDES MS4 Phase I or Phase II permits, which require agencies to develop and implement stormwater management plans. These plans include site design control measures to minimize the potential for exposed soils to generate erosion, such as conserving natural areas, protecting existing slopes and channels, minimizing impervious surfaces, the use of vegetated swales and buffers, and the use of grass median strips. Following construction, ongoing use of new or expanded roadways could continue to contribute to water quality degradation through stormwater runoff that includes roadway contaminants. This could be in the form of litter, deposition of particulate emissions and discharges from vehicles, and other urban contaminants that accumulate on and along roadways, where contaminants are then transported via existing storm drainage systems to receiving water bodies that can degrade overall water quality.

Table 3.9-4 lists planned transportation improvements (including new bicycle lanes, bridges, and road maintenance) that would cross CWA Section 303(d) impaired bodies of water. Depending on the constituent for which the waterbody is listed and the nature of the project, the construction of these improvements may contribute to the impairment. Transportation improvement projects that discharge into CWA Section 303(d)-listed impaired water bodies would be required to comply with TMDLs through the NPDES permitting process to prevent substantial water quality degradation. Transportation improvement projects that fall under the California Department of Transportation's (Caltrans') jurisdiction would be subject to the Caltrans Stormwater Program, which regulates all stormwater discharges from conveyances and maintenance facilities that are owned by Caltrans and would also be required to implement a stormwater management plan to reduce or eliminate the discharge of pollutants into storm drainage systems through BMPs during both construction and operation. These BMPs can include silt fencing, fiber rolls, sandbag barriers, and slope stabilization. Adherence to these regulations would substantially address the potential for buildout of the 2025 Blueprint to contribute to additional pollutants to existing Section 303(d)-listed impaired water bodies.

Summary

Development and transportation improvements occurring under the 2025 Blueprint would be required to comply with existing regulations, such as CWA Section 303(d), CALGreen, the NPDES permitting process, and Caltrans regulations. Compliance with existing regulations would ensure that implementation of the 2025 Blueprint would not violate water quality standards or waste discharge requirements. Impacts on water quality would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Table 3.9-4 Proposed Transportation Network Improvements and Programs Crossing Impaired Bodies of Water

Improvement	Type	Impaired Water Body
Bond Rd Buffered Class II	Bike Lanes	Laguna Creek (Sacramento County)
Calvine Road Class 4 Auberry to Bader	Bike Lanes	Laguna Creek (Sacramento County)
Eastside Elk Grove Blvd Buffered Class II	Bike Lanes	Elk Grove Creek
Elk Grove Creek Trail Extension	Construct Bike Trail	Elk Grove Creek
Elk Grove Florin Rd Buffered Class II	Bike Lanes	Laguna Creek (Sacramento County)
Emerald Vista Dr Buffered Class II	Bike Lanes	Elk Grove Creek
Laguna Blvd Buffered Class II	Bike Lanes	Elk Grove Creek
Laguna Creek (East) and Whitehouse Creek Trails	Construct Bike Trail	Laguna Creek (Sacramento County)
Laguna Creek Bond Road Undercrossing	Construct Bike Trail	Laguna Creek (Sacramento County)
Powerline Trail	Construct Bike Trail	Laguna Creek (Sacramento County)
Waterman Rd Buffered Class II	Bike Lanes	Laguna Creek (Sacramento County)
Coleman Rd. Reconstruction and Realignment	Road Construction / Realignment	Live Oak Slough
Baseline Road, Fiddyment to western Roseville City Limit, 6 Lanes	Road Widening	Curry Creek (Placer and Sutter counties)
Dry Creek Greenway East Phase 3	Construct Bike Trail	Linda Creek
Foothills Blvd. Extension	Road Construction / Realignment	Pleasant Grove Creek
SR 65 Bike/Ped Overcrossing	Construct Bike Trail	Pleasant Grove Creek
Industrial Avenue Bikeway	Construct Bike Trail	Pleasant Grove Creek
Powerline Corridor Class 1 Trail from Foothills to Washington	Construct Bike Trail	Pleasant Grove Creek, South Branch, unnamed southeastern trib (from east of Sierra View Country Club to confl with Pleasant Grove Cr, South Branch)
Santucci Blvd. Widening, Baseline to Pleasant Grove	Road Widening	Curry Creek (Placer and Sutter counties)
Westbrook Blvd. Widening, Blue Oaks to north City Boundary	Road Widening	Pleasant Grove Creek
American River Bridge Shared-Use Trail	Construct Bike Trail	American River, Lower (Nimbus Dam to confluence with Sacramento River)
Arcade Creek Shared Use Path	Construct Bike Trail	Arcade Creek
Replace Median Concrete Barrier	Road Maintenance	Auburn Ravine
Jackrabbit Trail Gap Closures	Construct Bike Trail	Natomas East Main Drainage Canal (aka Steelhead Creek, downstream of confluence with Arcade Creek)
Morrison Creek Trail	Construct Bike Trail	Morrison Creek

Improvement	Type	Impaired Water Body
Roseville 80 CAPM	Road Maintenance	Dry Creek (Placer and Sacramento counties)
Ninos Parkway Gap Closure	Construct Bike Trail	Natomas East Main Drainage Canal (i.e., Steelhead Creek, downstream of confluence with Arcade Creek)
SR 51: Stormwater reduction	Road Maintenance	Arcade Creek
SR 65 Managed Lanes Project: HOV	Highway HOV/Toll Lanes	Pleasant Grove Creek
College Park Drive	Road Widening	Pleasant Grove Creek, unnamed northern tributary (from Greywood Circle to confluence with Pleasant Grove Creek)
Dry Creek Greenway East	Construct Bike Trail	Linda Creek
Dry Creek Greenway West	Construct Bike Trail	Dry Creek (Placer and Sacramento counties)
Foothills Boulevard Widening (Phase 1)	Road Widening	Pleasant Grove Creek
Placer Creek Drive (Phase 1)	Road Widening	Curry Creek (Placer and Sutter Counties)
Pleasant Grove Creek Trail Extension	Construct Bike Trail	Pleasant Grove Creek
University Village Drive (Phase 1)	Road Widening	Pleasant Grove Creek, unnamed northern tributary (from Greywood Circle to confluence with Pleasant Grove Creek)
Arden Way Class IV Bikeway Improvements Phase 3	Bike Lanes	Chicken Ranch Slough
Cornerstone West Bicycle Boulevard	Bike Lanes	Morrison Creek
El Camino Ave Complete Streets	Bike Lanes	Strong Ranch Slough
Hurley Way Bikeway Improvements	Construct Bike Trail	Strong Ranch Slough
Install New Bridge on Florin Rd at Elder Creek Crossing	Bridge Project	Elder Creek (Sacramento County)
Stockton Blvd Class IV Bikeway	Bike Lanes	Elder Creek (Sacramento County)
Widen Bradshaw Road from Elder Creek Rd to SR 16	Road Widening	Morrison Creek
Widen Elk-Grove Florin Road from Gerber Rd to Florin Rd	Road Widening	Elder Creek (Sacramento County)
Bicycle Facilities parallel to SR 99 (Walton/Stabler, Clark)	Bike Lanes	Gilsizer Slough (from Yuba City to downstream of Township Road, Sutter County)
SR 20 Yuba River Bridge Deck Replacement	Bridge Project	Yuba River (Englebright Lake Dam to Lower Feather River)
County Road 24 Bike and Safety Project	Bike Lanes	Winters Canal (Yolo County)
SR 49 Rehab Cool to Borderland Ave	Road Maintenance	American River, North Fork
County Road 27 Bike and Safety Improvement Project	Bike Lanes	Willow Slough (Yolo County)
East Wheatland Expressway	Road Construction / Realignment	Bear River, Lower (below Camp Far West Reservoir)
Pike City Road over Oregon Creek Bridge Replacement	Bridge Project	Oregon Creek (Yuba and Sierra counties)

Improvement	Type	Impaired Water Body
Simpson Lane Bridge Rehabilitation	Bridge Project	Yuba River (Englebright Lake Dam to Lower Feather River)
Stormwater reduction: In Sacramento County on SR 99, approximately 0.01 miles North of Junction 143 to approximately 0.01 miles South of the 12th Avenue OC (24-0161). Trash Reduction SHOPP ID 23164	Road Maintenance	Laguna Creek (Sacramento County)
Construct Class II Bike Lane	Bike Lanes	Gilsizer Slough (from Yuba City to downstream of Township Road, Sutter County)
SR 99 Managed Lanes in both directions	Highway HOV/Toll Lanes	Natomas Cross Canal (Sutter County)
SR 99 Class II Bike Lane	Bike Lanes	Gilsizer Slough (from Yuba City to downstream of Township Road, Sutter County)
I-80 Managed Lanes East of SR 65 in both directions	Highway HOV/Toll Lanes	Auburn Ravine
SR 51 (Capital City) Managed Lanes Project: N St to El Camino Ave	Highway HOV/Toll Lanes	Lower American River (Nimbus Dam to confluence with Sacramento River)
SR 51 Bridge Deck Replacement	Bridge Project	American River, Lower (Nimbus Dam to confluence with Sacramento River)
I-5 at West End Viaduct (SHOPP Long Lead)	Bridge Project	Sacramento River (Knights Landing to the Delta)
Rio Vista Bridge Rehab	Bridge Project	Sacramento River (Sacramento City Marina to Suisun Marsh Wetlands)
SAC-99/51 Managed Lanes	Highway HOV/Toll Lanes	Laguna Creek (Sacramento County)
SR 99 South, US 50 to Elk Grove Blvd - Convert to Single Priced Managed Lane	Highway HOV/Toll Lanes	Laguna Creek (Sacramento County)
US 50 Managed Lanes from Watt Avenue to Cameron Drive	Highway HOV/Toll Lanes	Unnamed Tributary to Alder Creek (Sacramento County)
I-80: Sacramento River to SR 65: Conversion from HOV2+	Highway HOV/Toll Lanes	Natomas East Main Drainage Canal (i.e., Steelhead Creek, upstream of confluence with Arcade Creek)
EB Troy Grade - Kingvale Grade Segment 2	Road Widening	Yuba River, South Fork (Headwaters to Lake Spaulding)
In Sutter County from 0.6 mile north of Jct Rte 70 to Marcuse Rd. CAPM.	Road Widening	American River, Lower (Nimbus Dam to confluence with Sacramento River)
I-80 Drainage Improvements B	Road Maintenance	Auburn Ravine
Route 70 near Honcut Bridges, guardrails and two-way left turn lanes	Bridge Project	Honcut Creek (Butte and Yuba counties)
Repair shoulder damage and install concrete gutter in Placer County on Route 80 from 0.3 miles east of the South Yuba River Bridge to Nevada County on Route 80 at the Soda Springs OC B	Road Widening	Yuba River, South Fork (Headwaters to Lake Spaulding)
I-80 Guardrail upgrade	Road Maintenance	Dry Creek (Placer and Sacramento counties)
US 50 Bridge Improvements	Bridge Project	Sacramento River (Knights Landing to the Delta)

Improvement	Type	Impaired Water Body
SR 99 Pavement Rehabilitation A	Road Maintenance	Live Oak Slough
I-505 Bridge Improvements	Bridge Project	Putah Creek (Solano Lake to Putah Creek Sinks; partly in Delta Waterways, northwestern portion)
EB Big Bend (Kingvale Grade Segment 1)	Road Widening	South Fork Yuba River (Headwaters to Spaulding, Lake)
I-80 Auburn Pavement Rehabilitation	Road Maintenance	Auburn Ravine
SR 51 Pavement Rehab	Road Maintenance	Lower American River (Nimbus Dam to confluence with Sacramento River)
Repair shoulder damage and install concrete gutter in Placer County on Route 80 from 0.3 miles east of the South Yuba River Bridge to Nevada County on Route 80 at the Soda Springs OC A	Road Maintenance	South Fork Yuba River (Headwaters to Spaulding, Lake)
Repair steel structural components, 4 bridges, in Sac County on SR 160	Bridge Project	Sacramento River (Sacramento City Marina to Suisun Marsh Wetlands)
Treat 5 bridge decks in Sac County at various routes	Bridge Project	Natomas East Main Drainage Canal (i.e., Steelhead Creek, upstream of confluence with Arcade Creek)
I-5 Managed Lanes: I-5/US 50 Interchange to Sacramento River	Highway HOV/Toll Lanes	Natomas East Main Drainage Canal (i.e., Steelhead Creek, downstream of confluence with Arcade Creek)
I-5 Dual Lanes North	Highway HOV/Toll Lanes	Unnamed Tributary to Alder Creek (Sacramento County)
I-80 and US 50 Managed Lanes	Highway HOV/Toll Lanes	Putah Creek (Solano Lake to Putah Creek Sinks; partly in Delta Waterways, northwestern portion)
I-80 Dual Lanes West	Highway HOV/Toll Lanes	Sacramento River (Knights Landing to the Delta)
SR 12 Rio Vista Bridge Improvements	Bridge Project	Sacramento River (Sacramento City Marina to Suisun Marsh Wetlands)
SR 51 American River Bridge Child Project #3	Bridge Project	American River, Lower (Nimbus Dam to confluence with Sacramento River)
Rio Vista Bridge Op-Systems Upgrade	Bridge Project	Sacramento River (Sacramento City Marina to Suisun Marsh Wetlands)
YOL 80 Managed Lanes - Phase 1	Highway HOV/Toll Lanes	Putah Creek (Solano Lake to Putah Creek Sinks; partly in Delta Waterways, northwestern portion)
Russell Rd Placer Co 80	Road Maintenance	Auburn Ravine
I-5 Grade Raise	Road Widening	Mokelumne River, Lower (in Delta Waterways, eastern portion)
Delta Bridges M/E upgrade 2	Bridge Project	Sacramento River (Sacramento City Marina to Suisun Marsh Wetlands)
Bucks Bar Rd/North Fork Cosumnes River Bridge Replacement	Bridge Project	North Fork Cosumnes River
Mount Murphy Rd/South Fork American River Bridge Replacement	Bridge Project	South Fork American River (below Slab Creek Reservoir to Folsom Lake)

Improvement	Type	Impaired Water Body
Mosquito Rd/South Fork American River Bridge Replacement	Bridge Project	South Fork American River (below Slab Creek Reservoir to Folsom Lake)
Coleman Rd. Reconstruction and Realignment	Road Construction / Realignment	Live Oak Slough
Baseline Road	Road Widening	Curry Creek (Placer and Sutter counties)
Foothills Boulevard	Road Widening	Pleasant Grove Creek
Pleasant Grove Blvd. Widening	Road Widening	Pleasant Grove Creek, South Branch
Atkinson St./PFE Rd. Widening	Road Widening	Dry Creek (Placer and Sacramento counties)
Dry Creek Greenway Trail, Phase 1	Construct Bike Trail	Dry Creek (Placer and Sacramento counties)
Watt Avenue Widening (Phase 1)	Construct Bike Trail	Dry Creek (Placer and Sacramento counties)
Dry Creek Greenway West Trail	Construct Bike Trail	Dry Creek (Placer and Sacramento counties)
Westbrook Blvd. B	Road Widening	Pleasant Grove Creek
Washington Blvd/Andora Undercrossing Improvement Project	Construct Bike Trail	Pleasant Grove Creek, South Branch, unnamed southeastern trib (from east of Sierra View Country Club to confl with Pleasant Grove Cr, South Branch)
Yankee Jim's Rd Bridge at North Fork American River	Bridge Project	American River, North Fork
Watt Ave. Bridge Replacement	Bridge Project	Dry Creek (Placer and Sacramento counties)
McBean Park Bridge Rehabilitation	Bridge Project	Auburn Ravine
Truckee River Trail	Construct Bike Trail	Squaw Creek
Nelson Lane Extension	Road Widening	Auburn Ravine
Highway 49 Sidewalk Gap Closure	Road Widening	Rock Creek (Placer County)
Roseville Parkway Widening	Road Widening	Pleasant Grove Creek, South Branch
Auburn Folsom Rd Over Miners Ravine - Rehabilitate Bridge	Bridge Project	Miners Ravine (Placer County)
Gladding Rd Over Coon Creek - Rehabilitate Bridge	Bridge Project	Coon Creek (from confluence of Orr and Dry Creeks to East Side Canal, Placer and Sutter counties)
Dry Creek Rd Over Rock Creek - Rehabilitate Bridge	Bridge Project	Rock Creek (Placer County)
Washington Boulevard Bikeway and Pedestrian Pathways Project	Construct Bike Trail	Pleasant Grove Creek, South Branch, unnamed southeastern trib (from east of Sierra View Country Club to confl with Pleasant Grove Cr, South Branch)
Blue Oaks west widening, Westpark to Fiddyment	Road Widening	Lower Kaseberg Creek
Nelson Lane Auburn Ravine Bridge	Bridge Project	Auburn Ravine

Improvement	Type	Impaired Water Body
Lincoln Blvd Widening Over Auburn Ravine	Road Widening	Auburn Ravine
Vista Grande Arterial B	Road Widening	Curry Creek (Placer and Sutter counties)
Dry Creek Greenway Trail, Phase 2	Construct Bike Trail	Linda Creek
Mahany Park Trail Design and Construction	Construct Bike Trail	Kaseberg Creek, unnamed southeastern tributary (from Silverado Middle School to Timber Creek Golf Course, Placer County)
Stoneridge - Orvietto Bike Trail	Construct Bike Trail	Dry Creek (Placer and Sacramento counties)
Bridge Preventative Maintenance (Standalone) - Foresthill Road over the American River	Bridge Project	North Fork American River
Edgeline Installation	Road Widening	Auburn Ravine
Elkhorn Boulevard Widening	Road Widening	Natomas East Main Drainage Canal (i.e., Steelhead Creek, upstream of confluence with Arcade Creek)
Elverta Road Widening with Bridge Replacement at Dry Creek	Bridge Project	Dry Creek (Placer and Sacramento counties)
Douglas Road Extension	Road Construction / Realignment	Morrison Creek
Zinfandel Drive Widening A	Road Widening	Morrison Creek
Waterman Road Widening A	Road Widening	Elk Grove Creek
Florin Rd. Widening A	Road Widening	Elder Creek (Sacramento County)
Sunrise Blvd - Kiefer Blvd to SR16	Road Widening	Laguna Creek (Sacramento County)
Douglas Rd. Widening	Road Widening	Morrison Creek
Truxel Bridge	Bridge Project	Natomas East Main Drainage Canal (i.e., Steelhead Creek, downstream of confluence with Arcade Creek)
Michigan Bar Rd/Cosumnes River Bridge Replacement	Bridge Project	Upper Cosumnes River (above Michigan Bar)
Alta Mesa Rd Bridge Replacement	Bridge Project	Laguna Creek (tributary to Cosumnes River, Sacramento County)
Zinfandel Drive Extension & Realignment	Road Construction / Realignment	Morrison Creek
Walnut Grove Bridge Rehab	Bridge Project	Sacramento River (Sacramento City Marina to Suisun Marsh Wetlands)
Auburn Blvd. Bridge Replacement	Bridge Project	Arcade Creek
Waterman Road Widening E	Road Widening	Elder Creek (Sacramento County)
Bruceville Rd. Widening A	Road Widening	Laguna Creek (Sacramento County)
Elkhorn Boulevard Widening	Road Widening	Natomas East Main Drainage Canal (i.e., Steelhead Creek, upstream of confluence with Arcade Creek)
Walnut Grove Over Sacramento River Bridge Maintenance	Bridge Project	Sacramento River (Sacramento City Marina to Suisun Marsh Wetlands)

Improvement	Type	Impaired Water Body
Dry Creek Parkway Trail	Construct Bike Trail	Dry Creek (Placer and Sacramento Counties)
Sunrise Boulevard Rehabilitation Phase 2	Road Maintenance	Morrison Creek
Laguna Creek Inter-Regional Trail Segment 4	Construct Bike Trail	Laguna Creek (Sacramento County)
Alta Arden Expressway Phase 1	Road Construction / Realignment	Chicken Ranch Slough
Laguna Creek Parkway Regional Trail & Community Connectivity Project	Construct Bike Trail	Laguna Creek (Sacramento County)
Riego Rd Widening	Road Widening	Natomas East Main Drainage Canal (i.e., Steelhead Creek, upstream of confluence with Arcade Creek)
Nicolaus Ave. Bridge Replacement	Bridge Project	Coon Creek (from confluence of Orr and Dry Creeks to East Side Canal, Placer and Sutter Counties)
Larkin Road Reconstruction C	Road Construction / Realignment	Live Oak Slough
Paseo Ave	Road Construction / Realignment	Live Oak Slough
Pennington Rd Reconstruction B	Road Construction / Realignment	Live Oak Slough
Nuestro Rd Over Snake River - Bridge Replacement	Bridge Project	Snake River (Butte and Sutter Counties)
Grant Maintenance Paving Project	Road Maintenance	Live Oak Slough
65th Exp Lane reduction and landscaping	Road Maintenance	Morrison Creek
Capital Southeast Connector - D2a Douglas to White Rock	Road Construction / Realignment	Morrison Creek
CR 41 Bridge Replacement	Bridge Project	Cache Creek, Lower (Clear Lake Dam to Cache Creek Settling Basin near Yolo Bypass)
Broadway Bridge	Bridge Project	Sacramento River (Knights Landing to the Delta)
I Street Bridge Deck Conversion	Bridge Project	Sacramento River (Knights Landing to the Delta)
Ellis Rd Over Simmerly Slough - Bridge Replacement	Bridge Project	Simmerly Slough (Yuba County)
Loma Rica Road and South Beale Road	Bridge Project	Jack Slough

Source: Data provided by SACOG 2025.

Impact 3.9-2: Substantially Decrease Groundwater Supplies or Interfere with Groundwater Recharge such that the Project May Impede Sustainable Groundwater Management of the Basin

Regional Growth and Land Use Change

The regional growth pattern in the 2025 Blueprint would result in an intensification of land uses associated with development of impervious surfaces such as residential, commercial, and industrial buildings. A An increase in impervious surface area could result in less groundwater recharge and adversely impact groundwater replenishment. An increase in development could also increase demand for groundwater pumping.

As discussed in Section 3.9.1 "Regulatory Setting," SGMA applies to all groundwater basins in the state and provides local agencies with the authority to sustainably manage groundwater resources within their jurisdictions. In this case, the GSAs within the plan area include the Sacramento Groundwater Authority, Sacramento Central Groundwater Authority, West Placer GSA, Northern Delta GSA, Reclamation District 1001, South Sutter Water District, Sutter County GSA, Yolo Subbasin Groundwater Agency, and Yuba Water Agency. SGMA requires these GSAs to develop GMPs. GMPs in the plan area of the 2025 Blueprint include the North American Subbasin GSP, Olympic Valley GMP, and the YCWA GMP. Five of the GSAs also recently published the North American Subbasin GSP in 2021, and in Yolo County, the Yolo Subbasin GSP was published in 2022.

As shown in Table 3.9-2, there are 10 groundwater basins that could be affected by regional growth and land use changes associated with the 2025 Blueprint. However, these 10 groundwater basins are relatively large, with a majority of the growth occurring within the South American, Colusa, Yolo, and Solano groundwater subbasins. As shown in Table 3.9-2, the South American subbasin is 338 square miles in size; the Colusa subbasin is 1,131 square miles in size; the Yolo subbasin is 845 square miles in size; and the Solano subbasin is 554 square miles in size. Therefore, most of the growth would occur in an area covered by a total of 2,868 square miles of groundwater basins. In contrast, all of the growth in the plan area through 2050 is anticipated to affect approximately 64 square miles. The subbasins in the plan area are large and the increase in impervious surfaces would be a small portion of these subbasins and an even smaller portion of the greater Sacramento hydrologic region as a whole (i.e., the total development footprint, which is distributed throughout the plan area, is approximately 2 percent of the combined area of the basins). Therefore, regional growth associated with the 2025 Blueprint would not be expected to substantially affect the infiltration conditions of these subbasins or the greater hydrologic region as a whole.

Regional growth and land use projects located in already urbanized areas would not have a significant impact on existing groundwater recharge, as existing storm drainage infrastructure in these areas redirects rainfall and regular runoff from urbanized areas to receiving waters, thereby limiting the volume of groundwater recharge that occurs. Growth would be focused on an intensification of land uses in Center and Corridor Communities and Established Communities where infrastructure is already available and most surfaces are already paved or impervious to water infiltration for groundwater recharge. Such gradual intensification of areas that are currently mostly developed would have a minimal effect on existing groundwater recharge, as these locations currently do not substantially contribute to groundwater recharge.

Compared to existing conditions, regional growth land use projects associated with the 2025 Blueprint would increase the total amount of impervious surfaces in the plan area, which would reduce the volume of water available to recharge groundwater basins. However, each individual project must ensure compliance with established regulations protecting groundwater, such as the Groundwater Management Act, Olympic Valley GMP, the YCWA GMP, the North American Subbasin GSP, and/or the Yolo Subbasin GSP, depending on the site locations of each project. Any groundwater provisions from applicable local regulations and general plans would also apply to a project's construction and design as it pertains to stormwater and runoff requirements. For example, as discussed above under Impact 3.9-1, the NPDES permitting process may require the incorporation of LID practices such as onsite filtration of runoff, retention basins to control runoff volume, and other types of stormwater management design.

In addition to interfering with groundwater recharge, development could affect groundwater supplies if there is a substantial increase in demand for groundwater pumping. Impacts related to water supply, including groundwater supplies, are discussed in Section 3.17, "Utilities and Service Systems." During construction, projects would use water,

which would be supplied by water trucks from contracted vendors, to minimize the generation of fugitive dust. Groundwater would not typically be extracted from the immediate project area for use on a particular site. Groundwater may, however, be part of the regional water supplies obtained by the water vendors, including from local municipal water. The quantity of water required for dust suppression during construction would not substantially decrease these groundwater supplies or impede sustainable management of the groundwater basin. As discussed in Section 3.17, "Utilities and Service Systems," only about 25 percent of all groundwater extraction in the region is for urban water usage, but this does provide for about half of the urban water needs. As described above, urban water suppliers are required to plan for the sustainable use of groundwater in their projections of supply. As shown in Table 3.17-3 through Table 3.17-5, urban water suppliers in the plan area are projected to provide water supplies, including groundwater, that adequately serve projected demand for the projected population through 2040 during normal years; therefore, increased demand for groundwater supplies related to development under the 2025 Blueprint is not expected to substantially deplete groundwater supplies.

Transportation Network Improvements and Programs

As it pertains to groundwater recharge, many of the proposed transportation improvements would be located on already existing impervious surfaces with existing stormwater drainage infrastructure; however, the 2025 Blueprint does propose the construction of new freeway lanes, surface streets, and bike routes, all of which would involve the construction of new impervious surfaces and contribute to limiting regional groundwater recharge. Therefore, compared to existing conditions, transportation network improvements and programs would increase the total amount of impervious surfaces in the plan area, which would reduce the volume of water available to recharge groundwater basins. As described above, individual projects are required to comply with established regulations protecting groundwater that may include drainage and infiltration systems to limit or reduce the volume of offsite runoff and allow for onsite groundwater recharge. In addition, the groundwater subbasins located within the plan area are large and the areas where transportation network improvements would be expected to increase impervious surfaces is generally a small portion of these subbasins and an even smaller portion of the greater Sacramento hydrologic region as a whole. Therefore, projects related to transportation network improvements associated with the 2025 Blueprint would not be expected to substantially affect the infiltration conditions of these subbasins or the greater hydrologic region as a whole.

As described for development in the regional growth pattern, construction of transportation projects would require the use of water to minimize the generation of fugitive dust. The quantity of water required for dust suppression during construction would not substantially decrease these groundwater supplies or impede sustainable management of the groundwater basin. In addition, due to their very nature, transportation improvement projects would have negligible long-term demand for water. As a result, the transportation projects would not substantially influence groundwater withdrawal in the plan area.

Summary

Growth and development through 2050 would increase impervious surfaces and demand for water. At the regional level, the plan would not interfere with groundwater recharge or decrease groundwater supplies through increased groundwater demand to the degree that sustainable management of any of the 10 basins in the plan area would be impeded. This is due to the magnitude of growth, the nature of anticipated projects (which would be focused in areas that do not contribute to groundwater recharge in baseline conditions, and compliance with established federal, state, and local regulations protecting groundwater recharge. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.9-3: Substantially Alter the Existing Drainage Pattern such that Erosion, Siltation, Runoff, Flooding, or an Exceedance of the Capacity of Storm Drainage Systems Would Occur

Regional Growth and Land Use Change

Development associated with land use growth aligned with the 2025 Blueprint would have the potential to alter existing drainage patterns.

Erosion, siltation, runoff, flooding, and storm drainage infrastructure resulting from development is controlled through regulatory compliance, such as the NPDES permitting process, enforced by the Central Valley RWQCB and Lahontan RWQCB, as well as applicable local drainage and erosion control ordinances and standards within the plan area. Residential projects that disturb less than 1 acre of land and are not part of a larger development plan that disturbs 1 acre or more are required to comply with CALGreen Section 4.106.2, *Stormwater Drainage and Retention During Construction*, and Section 4.106.3, *Grading and Paving*, regarding operation and the prevention of flooding onsite. Similarly, nonresidential development projects that disturb less than 1 acre of land and are not part of a larger development plan are required to comply with CALGreen Section 5.106.1, *Stormwater Pollution Prevention for Projects that Disturb Less than One Acre of Land*. These sections include requirements for the preservation of slopes, management of stormwater drainage, erosion control, and infiltration/retention of runoff onsite to decrease the volume of generated onsite runoff and increase groundwater recharge.

To address the alteration of drainage patterns that could affect erosion and siltation, residential and nonresidential projects that would disturb more than 1 acre of land are subject to the NPDES Construction General Permit, which requires that a SWPPP (and identified BMPs within) be implemented. For example, typical erosion control and siltation BMPs can include physical barriers to prevent erosion and sedimentation such as temporary mulching, seeding, straw wattles, silt fencing, or other stabilization measures to protect uncovered soils from erosion and reduce the volume of runoff siltation entering drains. With implementation of the SWPPP, the construction and operation of projects would not be expected to result in substantial erosion, siltation, or flooding on- or off-site.

To address the alteration of drainage patterns that could affect existing flood risk, compliance with the NPDES MS4 Phase I and Phase II permits requires agencies to implement stormwater management plans. Stormwater management plans require the implementation of site design control measures, which can include conserving natural areas, protecting slopes and channels, minimizing impervious surfaces, the use of vegetated swales and buffers, grass median strips, detention basins, ponds or constructed wetlands, infiltration basins, settlement ponds, or other LID practices and drainage control features such as rain gardens, vegetated rooftops, rain barrels, and permeable pavement. These design practices would help to maximize onsite infiltration of runoff, preserve natural drainage flow where appropriate, and control stormwater drainage and runoff flow to minimize potential drainage impacts affecting existing flood risk. Although future development could result in an increased volume of surface water runoff from new impervious surfaces compared to existing conditions, compliance with local, state, and federal regulations would be effective in minimizing impacts related to alteration of drainage.

Most of the proposed regional growth would be concentrated in built-out areas where drainage infrastructure already exists. In these areas, increasing intensification of land uses would either be accommodated by existing drainage infrastructure or project applicants would be required to construct infrastructure improvements in accordance with local ordinances within the plan area. Growth proposed in undeveloped and/or vacant areas with no previous infrastructure would be required to comply with either CALGreen or NPDES, depending on project size; site design control measures and LID practices to address flooding; and local ordinances and regulations regarding onsite drainage, stormwater management, and runoff. Compliance with applicable regulations would ensure that drainage would not be altered such that surface water would exceed the capacity of existing or planned stormwater drainage systems.

Transportation Network Improvements and Programs

Proposed transportation network improvements and programs could also alter drainage patterns resulting in increased rates of surface water runoff from new impervious surfaces that contribute to increased erosion, siltation, and flooding. However, similar to regional land use growth, construction and operation of transportation network improvements and programs, depending on size, would be subject to CALGreen or the NPDES permitting process,

which would minimize impacts to drainage patterns affecting erosion, siltation, and flooding and ensure stormwater and drainage control. These projects would also be subject to applicable local ordinances in the plan area regarding stormwater and grading. In addition, proposed transportation improvements where Caltrans is the leady agency would be required to comply with the Caltrans Stormwater Program, which regulates all stormwater discharges from conveyances and maintenance facilities that are owned by Caltrans. Transportation improvement projects would be required to implement a Stormwater Management Plan to ensure drainage is not altered such that the capacity of a drainage system is exceeded.

Summary

Compliance with the NPDES permitting process and CALGreen would minimize the impacts of land use and transportation improvement projects associated with the 2025 Blueprint related to alteration of drainage. Regulatory compliance and evaluation of this adherence on an individual project-by-project basis would ensure that construction and operation of regional growth land use projects and transportation network improvements and programs would not substantially alter the existing drainage pattern of the site or area. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.9-4: In Flood Hazard or Seiche Zones, Risk Release of Pollutants Due to Project Inundation

Regional Growth and Land Use Change

Due to the historic likelihood of flood hazards, a system of dams, levees, flow bypasses, and reservoirs serve to divert floodwater and control flooding within the plan area. The regional growth pattern would result in development within 100-year or 200-year flood hazard zones and areas that could subject to flooding due to dam or levee failure (see Figures 3.9-2, 3.9-3, and 3.9-4, above, and Figure 2-2 in Chapter 2, "Project Description). Although the plan area around Folsom Lake is also susceptible to seiche, there is no history of seiche events at Folsom Lake, and the potential for strong ground motion that could cause a seiche, such as earthquakes and landslides, is limited in the plan area.

FEMA prepares FIRMs that delineate floodplains in geographic areas across the nation to assist with appropriate land use planning and floodplain management decisions needed to meet the requirements of the NFIP. In general, the NFIP mandates that development is not to proceed within the 100-year floodplain if development is expected to increase in flood elevation by 1 foot or more. Due to historic flooding, the 2008 Central Valley Flood Protection Act requires that land use agencies use the 200-year flood event to establish minimum flood protection requirements for urban and urbanizing areas. Development in the plan area is required to align with the 2022 CVFPP as part of compliance with the 2008 Central Valley Flood Protection Act. Designing regional growth land use projects to CVFPP standards would ensure that land use development proposed in association with the 2025 Blueprint would be built to minimize flood risk.

Development associated with the 2025 Blueprint would be required to comply with CBC design requirements to reduce the risk of building and structure damage from flooding and inundation due to a storm (i.e., 100- or 200-year flood event), dam failure, or levee failure, which would increase protection of stored hazardous materials and pollutants and help minimize the potential for release of pollutants due to site inundation.

Development projects associated with regional growth in the plan area would also be subject to the requirements of applicable municipal and county flood control management regulatory agencies, in this case the Placer County Flood Control and Water Conservation District, SAFCA, Sacramento County Department of Water Resources, American River Flood Control District, West Sacramento Flood Control Agency, Sutter County Flood Control and Water Conservation District, American River Flood Control District, Yolo County Flood Control and Water Conservation District, and YWCA. Compliance with individual requirements or regulatory oversight, approval, or involvement from municipal and county flood control management agencies would further reduce the risk of pollutant release due to project site inundation.

Therefore, development would occur in areas that are potentially subject to flooding. As described in Section 3.8, "Hazards and Hazardous Materials," development that occurs in the plan area could include a range of type and intensity of pollutants during construction and operation. The use and storage of these pollutants is regulated to minimize the potential for accidental release. State and local regulations are also in place that require flood protection. As a result, there is not a substantial risk of pollutant release due to project inundation.

Transportation Network Improvements and Programs

The 2025 Blueprint would include transportation network improvements and programs located within areas susceptible to flooding, dam failure, and levee failure. Figure 3.9-7 shows planned transportation improvements located in areas susceptible to dam inundation. Other flood hazards are shown in Figure 3.9-2. The inundation of transportation infrastructure can result in the release of contaminants associated with these corridors, such as aerially deposited lead and surface oils. In the event of large-scale flooding, these minor releases would not substantially impair surface water quality.

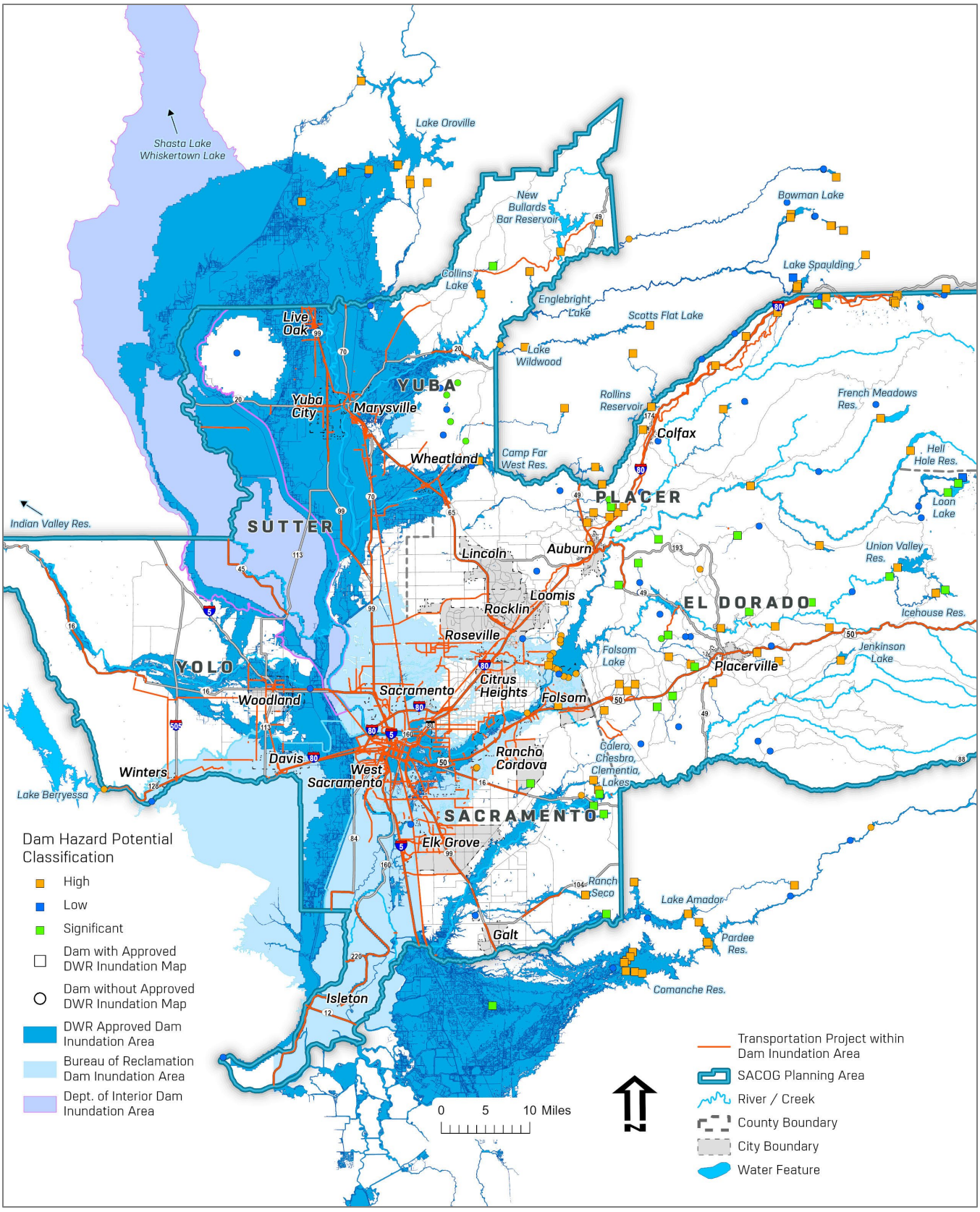
A majority of transportation improvement programs would be located within existing rights of way for transportation infrastructure. Road maintenance and rehabilitation, transit improvements, bicycle and pedestrian improvements, and safety projects, system operations, and programs associated with implementation of the 2025 Blueprint would have no substantial increase in existing flood risk or increased risk of releasing pollutants, as these types of transportation infrastructure improvements generally do not involve changes to existing waterways or alterations to existing dam or other flood control facilities that could affect the existing level of inundation risk. Development of transportation improvement projects that include new or expanded facilities would be subject to the federal, state, and local regulatory compliance requirements discussed above to improve flood risk management through design. Therefore, proposed transportation improvements associated with the 2025 Blueprint would not substantially increase the existing risk of releasing pollutants due to site inundation, and compliance with applicable regulations would further reduce the risk of site inundation due to a flood event, dam failure, or levee failure that could result in release of pollutants.

Summary

Land uses and transportation facilities in the 2025 Blueprint located within the 100-year or 200-year flood hazard zones, as well as a dam inundation zones, would be subject to the safety and design requirements of the CVFPP, CBC, and the requirements of individual municipal and county flood control management agencies. Compliance with these regulatory requirements would address the risk of flooding. As a result, the risk of releasing pollutants due to project inundation would be **less than significant**. For an analysis addressing the proper transportation, storage, use, and disposal of hazardous materials, see Section 3.8, "Hazards and Hazardous Materials," in this Draft EIR.

Mitigation Measures

No mitigation is required for this impact.



Source: Prepared by SACOG in 2025.

Figure 3.9-7 Proposed Transportation Network Improvements and Programs Located within Dam Inundation Areas

Impact 3.9-5: Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan

Regional Growth and Land Use Change

Regional growth would be located within the hydrologic region of the Sacramento River and the San Joaquin River. Development of these projects would therefore be subject to the Central Valley RWQCB Basin Plan. The Basin Plan includes water quality standards established for groundwater and surface water within the Basin Plan for the Sacramento River Basin and San Joaquin River Basin.

As discussed in Impact 3.9-1, impacts related to water quality would be addressed through compliance with CWA Section 303(d), CALGreen, NPDES permitting, and Caltrans regulations. Proposed projects that comply with existing regulations, in particular the NPDES permitting process, are considered to be consistent with the applicable Basin Plan-this is because the aspects of Basin Plans that apply to new development are primarily implemented by using the NPDES permitting system to regulate water discharges so that water quality objectives are met. Basin Plans include objectives that determine waste discharge limits and implement enforcement actions.

The land use projects associated with regional growth of the 2025 Blueprint would also be subject to the applicable Groundwater Management Plans. For the plan area, the applicable GMPs include the Olympic Valley GMP, the YCWA GSP, the North American Subbasin GSP, and the Yolo Subbasin GSP. These plans provide details and objectives for how each subbasin and GMP will achieve and maintain long-term sustainability and account for projected water demands of each basin and subbasin that are anticipated to change as a result of land use conditions and population growth. The 2025 Blueprint itself does not propose specific physical development but rather provides a blueprint for planned development of the SACOG region through 2050. The 2025 Blueprint includes strategies to guide the Sacramento region toward more sustainable future growth through the better integration of land use development coupled with multi-modal transportation options and reduced single-occupancy vehicle travel. This development would support the location of homes and job centers in areas that already include substantial levels of development. As a result, new development to accommodate growth would be more likely to occur on land with existing impervious surfacing and stormwater runoff drainage infrastructure, thereby limiting the potential to interfere with groundwater recharge.

Individual projects proposed in association with the 2025 Blueprint would be required to demonstrate their consistency with applicable water quality and groundwater management/groundwater sustainability plans on a project-level basis, as part of the project approval process.

Transportation Network Improvements and Programs

Similar to regional growth land use projects, transportation network improvements and programs would be subject to federal, state, and local regulations protecting groundwater and surface water quality. Transportation network improvements and programs would be located within the hydrologic region of the Sacramento River and San Joaquin River and are, therefore, subject to the Central Valley RWQCB Basin Plan.

Similar to the discussion above for the regional growth pattern, transportation projects implemented under the 2025 Blueprint would not significantly conflict with or obstruct applicable groundwater management plans and GSPs, such as the Sacramento Groundwater Authority Groundwater Management Plan, Olympic Valley Groundwater Management Plan, Yuba County GSP, North American Subbasin GSP, and Yolo County Subbasin GSP. Proposed transportation network improvements and programs, as shown in Figure 2-5 of Chapter 2, "Project Description," are located primarily in areas that already include existing transportation infrastructure. Transportation network improvements and programs that do not require new or expanded physical facilities would have a smaller area of disturbance than the to regional growth land use projects and would consequently have less potential to interfere with groundwater recharge. In addition, as described above, transportation projects generally generate little or no demand for water. Therefore, transportation-related projects would not be expected to significantly affect groundwater sustainability. At a project-level, individual transportation network improvement projects would also be required to demonstrate their consistency with the applicable water quality plans and GMP/GSPs as part of each individual project approval processes. Therefore, transportation network improvements associated with the 2025

Blueprint would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan.

Summary

Individual projects proposed in association with, or projects that would align with, the 2025 Blueprint would be required to demonstrate compliance with applicable surface water and groundwater quality management plans as part of the approval process at the project level. Demonstrating compliance with these plans would ensure that individual projects would not significantly conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

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3.10 LAND USE AND PLANNING

This section describes the existing conditions (environmental and regulatory) and assesses the potential land use and planning impacts of the 2025 Blueprint. Specifically, this section evaluates whether implementing the project would physically divide an established community; or conflict with land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. The evaluation in this section is specific to land planning. Consistency with resource-specific regulations and adopted plans are evaluated, as appropriate, within the respective resource sections of this Draft EIR. For example, consistency with natural community conservation plans and habitat conservation plans is described in Section 3.4, "Biological Resources," and potential to result in a hazard due to inconsistency with an airport land use plan is evaluated in Section 3.8, "Hazards and Hazardous Materials." Consistency with Williamson Act contracts is addressed in Section 3.2, "Agriculture and Forestry Resources." Similarly, the physical environmental effects associated with construction and operation of the project, many of which pertain to issues of land use compatibility (e.g., noise, aesthetics, air quality), are evaluated in other sections of this Draft EIR.

SACOG received comments related to land use and planning during the scoping meetings held in response to the notice of preparation. Comments suggest that the 2025 Blueprint should be consistent with housing elements and other parts of local general plans. Comments also expressed support for infill and adaptive reuse of existing structures. The following analysis evaluates the effects of implementing the proposed plan; planning considerations related to the scope of the 2025 Blueprint are beyond the reach of this Draft EIR.

SACOG also received a written comment from the Delta Stewardship Council. This letter summarizes the requirements of the Sacramento-San Joaquin Delta Reform Act of 2009 (Water Code Section 85000 et seq) pertaining to the 2025 Blueprint and provides recommendations regarding analysis of the 2025 Blueprint's consistency with the Delta Plan. This comment has been carefully reviewed and considered by SACOG and is reflected in the analysis of impacts in this chapter. Appendix A includes all comments received in response to the notice of preparation and a summary of the scoping meetings.

3.10.1 Regulatory Setting

FEDERAL

John D. Dingell, Jr. Conservation, Management, and Recreation Act: Sacramento-San Joaquin Delta National Heritage Area

On March 12, 2019, President Trump signed the John D. Dingell, Jr. Conservation, Management, and Recreation Act, a large conservation and public lands bill that includes the establishment of the Sacramento-San Joaquin Delta National Heritage Area (NHA). The NHA boundaries extend from Sacramento to Stockton to Vallejo. The Delta Protection Commission (DPC) is the local coordinating entity for the Delta NHA and has prepared a management plan, which provides guidance on ways to preserve, enhance, and educate the public about Delta and Carquinez Strait heritage. Through public-private partnerships, NHA entities support historic preservation, natural resource conservation, recreation, heritage tourism, and educational projects. NHAs have no effect on water rights, property rights, or hunting and fishing rights within the designated area.

Clean Air Act – Conformity Requirements

Federal Clean Air Act Air Quality Conformity for Transportation requirements pursuant to the Amendments of 1990 apply in all metropolitan planning organization (MPO) nonattainment and maintenance areas. Section 176(c) of the federal Clean Air Act of 1970 (42 US Code [USC] Section 7401 et seq.) sets forth the definition of conformity for a regional transportation plan (RTP). SACOG must ensure that the transportation and transit projects and the emissions associated with such projects contained in the metropolitan transportation plan (MTP) conform to the state implementation plan (SIP). The determination of Conformity must be based on the most recent estimates of emissions found in the SIP, and those estimates must be determined from the most recent population, employment,

travel, congestion, and land use estimates as determined by the MPO or other agency authorized to make such estimates and approved by the MPO (42 USC Section 7506). Under the US Department of Transportation Metropolitan Planning Regulations (Code of Federal Regulations [CFR] Title 23 Part 450 and 771 and Title 49 CFR Part 613) and US Environmental Protection Agency's (EPA's) Transportation Conformity Rule (Title 40 CFR Part 93) requirements, the RTP needs to meet four requirements: (1) regional emissions analysis, (2) timely implementation of Transportation Control Measures, (3) financial constraints analysis, and (4) interagency consultation and public involvement. The transportation conformity rule (Title 40 CFR Part 93 Subpart A) sets forth the policy, criteria, and procedures for demonstrating and assuring conformity of transportation activities.

STATE

Sustainable Communities and Climate Protection Act

In 2008, California enacted Senate Bill (SB) 375 (Chapter 728, Statutes of 2008), which coordinates regional land use and transportation planning through the requirement to adopt a Sustainable Communities Strategy (SCS) as part of the MTP. The purpose of the SCS is to reduce greenhouse gas (GHG) emissions from cars and light trucks in alignment with GHG targets that are set by the California Air Resources Board (CARB), expressed as a percent change in per capita passenger vehicle GHG emissions. If the SCS does not achieve the GHG emission targets set by CARB, an alternative planning strategy (APS) must be prepared to demonstrate how the targets could be achieved.

SB 375 does not require local governments to revise their "land use policies and regulations, including [their] general plan," to be consistent with the SCS (Government Code Section 65080 et seq.) The land use portion of the SCS is implemented through voluntary local government actions.

CEQA Streamlining Benefits for Land Use Projects

Specified projects that are consistent with an SCS or APS accepted by CARB receive CEQA streamlining benefits. SB 375 provides three tiers of CEQA streamlining benefits for Residential Mixed-Use Projects, Transit Priority Projects, and Sustainable Community Projects, as described below.

Generally, a Residential Mixed-Use project must be at least 75 percent residential and be consistent with the general land use designation, density, building intensity, and applicable policies of an SCS or APS accepted by CARB as achieving the GHG emissions reduction targets for cars and light duty trucks established for the SACOG region. CEQA documents for these projects are not required to discuss growth inducing impacts, reduced density alternatives, or any project specific or cumulative impacts from cars and light-duty truck trips on global warming or the regional transportation network.

Transit Priority Projects (TPPs) must also be consistent with an SCS or APS accepted by CARB as described above. In addition, the TPP must meet the following requirements: (1) the project must contain at least 50 percent residential use based on total building square footage, but if less than 75 percent residential, it must have a minimum Floor Area Ratio of 0.75; (2) it must have a minimum net density of 20 dwelling units per acre; and (3) it must be located within 0.5 mile of a major transit stop or high quality transit corridor included in the MTP. Projects meeting the above requirements will have all the benefits of Residential Mixed-Use projects, discussed above, plus the option to conduct a sustainable communities environmental assessment (SCEA), rather than prepare an environmental impact report or negative declaration. Under the SCEA, an Initial Study is prepared identifying significant or potentially significant impacts. Where the lead agency determines that cumulative impacts have already been addressed and mitigated in an SCS or APS accepted by CARB, they are not "cumulatively considerable" for purposes of further environmental review. Also, traffic control and mitigation may be covered by jurisdiction-wide measures, and off-site alternatives do not need to be addressed. The standard of review for the SCEA is the "substantial evidence" standard, which is deferential to the lead agency.

The highest level of CEQA streamlining under SB 375 is provided to Sustainable Community Projects, which are projects that meet all the qualifications of a TPP described above, as well as the following requirements, and are exempt from CEQA review:

- served by existing utilities;
- no impacts to wetlands, riparian habitats, endangered species, or native plants;
- no impacts to historic resources;
- no risks from hazardous substances;
- no risk from wildfires, seismic issues, or floods;
- 15 percent more energy efficient than California requirements and 25 percent more water efficient than average for area;
- no more than 8 acres in project area;
- no more than 200 units;
- no building greater than 75,000 square feet;
- no net loss of affordable housing for jurisdiction;
- compatible with surrounding industrial uses (if applicable);
- within 0.5 mile of rail or ferry stop or one-quarter mile of high-quality bus line; and
- meets affordable housing minimum or open space minimum or pay in-lieu fee.

California Government Code Sections 65580 and 65581

Section 6550 and 65881 establish that the availability of housing is of vital statewide importance and prioritizes the early attainment of decent housing and a suitable living environment for every Californian, including farmworkers. The code recognizes that cooperation at all levels of government is necessary to accommodate the housing needs of Californians of all economic levels. These sections of the Government Codes are intended to assure that counties and cities recognize their responsibilities in contributing to the attainment of the state housing goal; to assure that counties and cities will prepare and implement housing elements which, along with federal and state programs, will move toward attainment of the state housing goal; and to ensure that each local government cooperates with other local governments in order to address regional housing needs.

The Delta Protection Act of 1992

The Delta Protection Act of 1992 (Public Resources Code [PRC] Section 29760 et seq.) established the DPC as a State entity to plan for and guide the conservation and enhancement of the natural resources of the Delta while sustaining agriculture and meeting increased recreational demand. The act defines a Primary Zone, which comprises the principal jurisdiction of the DPC. The Secondary Zone is the area outside the Primary Zone and within the "Legal Delta."

Both Primary and Secondary Delta Zones overlay the southern end of the plan area within Yolo and Sacramento counties. The southernmost portions of Sacramento and Yolo counties within the plan area are located within the Delta Primary Zone. Isleton, a portion of the City of Sacramento, and a portion of the City of West Sacramento are located within the Delta Secondary Zone. The Delta Protection Act requires the DPC to prepare and adopt a land use and resource management plan (LURMP) for the Primary Zone of the Delta.

The current LURMP was adopted in 2010. The LURMP guides local land use decisions on projects in the areas of agriculture, flood protection, Delta communities, natural resources, recreation, and utilities and infrastructure. The LURMP sets forth a description of the needs and goals for the Delta and a statement of the policies, standards, and elements for implementing those goals. General plans and projects in the five Delta counties must be consistent with the LURMP and are subject to review by the DPC.

Sacramento-San Joaquin Delta Reform Act of 2009

The Sacramento-San Joaquin Delta Reform Act of 2009 (Water Code Section 85000 et seq) established the Delta Stewardship Council (DSC), an independent state agency, and charges the DSC with furthering California's coequal goals of providing a more reliable water supply and protecting, restoring, and enhancing the Sacramento-San Joaquin River Delta ecosystem.

The DSC is made up of seven members that are advised by a 10-member board of scientists. The DSC is charged with developing and adopting a Delta Plan. The Delta Plan's 14 regulatory policies were approved by the Office of Administrative Law and became effective with legally enforceable regulations set forth in California Code of Regulations, title 23, sections 5001 et seq. on September 1, 2013. The Delta Plan was amended on February 2016 to include refined performance measures, which were again amended in April 2018. Further updates occurred in 2019, and the Ecosystem Amendment of the Delta Plan was approved in June 2022. Most recently, in January 2024, the Delta Levees Investment Strategy amendment was published, which updates the plan's priorities to reducing flood risk, guiding the prioritization of state investments in the Delta, and better integrating Delta levees with other Delta actions and statewide flood control. Delta Plan Policy DP P1 (CCR, Title 23, Section 5010.) places certain limits on new urban development within the Delta. New residential, commercial, or industrial development must be limited to areas that city or county general plans designated for that type of development as of the date of the Delta Plan's adoption, which was May 16, 2013.

Chapter 4 of the Delta Plan also establishes that State and local agencies must protect the few remaining areas in the Delta and Suisun Marsh that present opportunities to reestablish land-water connections. The less-subsided flood basins, river corridors, and reclaimed wetlands on the Delta's perimeter offer the most promising restoration opportunities. Accordingly, the Delta Plan identifies six Priority Habitat Restoration Areas: Yolo Bypass, from the Fremont Weir south toward the Delta; Cache Slough Complex, southwest of the Yolo Bypass; Cosumnes River-Mokelumne River confluence; Lower San Joaquin River floodplain between Stockton and Manteca; Suisun Marsh; and Western Delta/Eastern Contra Costa County.

Under Water Code Section 85057.5, transportation plans and projects within the Delta's secondary zone are not considered "covered activities" under the Delta Plan, provided that SACOG has determined they are consistent with an SCS or APS that has been accepted by CARB. Therefore, regional transportation plans, such as the 2025 Blueprint, and the programs, projects, and activities, as well as any infrastructure necessary to support those plans, programs, projects, or activities would not be covered activities. However, the DSC reviews any plan that includes land within the Delta zones, whether or not it is a covered action. In addition, the Delta Reform Act grants the DPC specific authority to review and advise local and regional planning agencies regarding the consistency of local and regional planning documents, including SCS and APS, with the Delta Plan (Water Code Section 85212.) MPOs with a planning area that crosses these boundaries are required to follow a consultation procedure with the DSC. This procedure includes early coordination to determine consistency of the proposed MTP/SCS with the Delta Plan. If the DSC concludes that the proposed MTP/SCS is inconsistent with the Delta Plan, it must provide written notice of the claimed inconsistency no later than 30 days prior to the adoption of the final MTP/SCS. If the DSC provides timely notice of a claimed inconsistency, the MPO must include a detailed response to the DSC's notice in the final MTP/SCS (Water Code Section 85212). SACOG has engaged in early consultation with the DSC. An initial meeting occurred on March 4, 2025, and a follow-up meeting was held on April 4, 2025.

Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000

The Cortese-Knox-Hertzberg Act (Government Code Section 56000 et seq.) establishes the process through which local agency boundaries are established and revised. Each county must have a local agency formation commission (LAFCo), which is the agency that has the responsibility to create orderly local government boundaries, with the goal of encouraging "planned, well-ordered, efficient urban development patterns," the preservation of open space lands, and the discouragement of urban sprawl. A LAFCo typically consists of two county supervisors, two representatives of the county's cities, and one member of the public. Many LAFCos also include one special district representative. While LAFCos have no land use authority, their actions determine which local government will be responsible for planning new areas.

LAFCos address a wide range of boundary actions, including the creation of spheres of influence for cities; adjustments to boundaries of special districts; annexations, incorporations, detachments of areas from cities; and dissolutions of cities. Since 1992, state law requires that the incorporation of a new city must not financially harm the county and must result in a positive cash flow for the new city, a requirement that has slowed the rate of new city incorporation.

LOCAL

General Plans

The legal framework in which California cities and counties exercise local planning and land use functions is provided in the California Planning and Zoning Law (Government Code Section 65000 et seq.) Under state planning law, each city and county is required to adopt a general plan "for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning" (Government Code Section 65300 et seq.). The most comprehensive land use planning for the plan area is provided in city and county general plans. The general plans contain goals and policies concerning topics that are mandated by state law or which the jurisdiction has voluntarily chosen to include. They must contain land use, housing, circulation, open space, conservation, noise, safety, and (in many cases) environmental justice elements, as well as any other elements that the city or county may wish to adopt. Other topics that local governments frequently choose to address are public facilities, parks and recreation, and agriculture, among others. All elements must be consistent with one another. County general plans cover unincorporated areas, while city general plans are required to cover an area that is generally larger than the existing city limits (i.e., portions of the unincorporated area that fall within a city's sphere of influence).

Zoning

The city or county zoning code is the set of detailed land use regulations that implement the general plan policies at the parcel level. The zoning code identifies allowed uses and required development regulations by district or area. Since 1971, state law has required the city or county zoning code to be consistent with the jurisdiction's general plan (Government Code Section 65860). As of 2018, this requirement also applies to charter cities (Government Code Section 65860[d]).

Specific and Community Plans

A city or county may also provide land use planning by developing community or specific plans for smaller, more specific areas within their jurisdiction. These more localized plans provide for focused guidance for developing a specific area, with development standards tailored to the area, as well as systematic implementation of the general plan. Specific and community plans are required to be consistent with the city's or county's general plan. Zoning ordinances and land use approvals must be consistent with applicable specific plans as well as the general plan. Cities and counties are also required to comply with the Subdivision Map Act (Government Code Section 66410 et seq.). The Subdivision Map Act 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 approved and the physical improvements to be installed.

Habitat Conservation Plans

Active habitat conservation plans (HCPs) and natural community conservation plans (NCCPs) within the plan area include: the Natomas Basin HCP, the Placer County Conservation Program, the South Sacramento HCP, and the Yolo HCP/NCCP. Through these plans, local jurisdictions have established a streamlined permitting and mitigation process that is intended to incentivize growth that is consistent with the jurisdiction's land use plans and provide a framework for regional habitat protection A summary of these plans and evaluation of consistency with adopted HCPs and NCCPs is provided in Section 3.4, "Biological Resources."

Airport Land Use Compatibility Plans

Pursuant to state law, each county with an airport has an airport land use commission (ALUC). The ALUC prepares an airport land use compatibility plan (ALUCP) for each public use airport. The plan provides for the orderly growth of

the airport and the area surrounding the airport, excluding existing land uses. Its primary function is to safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general. Cities and counties must submit their general and specific plans to the ALUC upon adoption or amendment, which must be consistent with the ALUCP. Local jurisdictions are responsible for land use compatibility controls around airports. For more information on airport land use compatibility, see Section 3.8, "Hazards and Hazardous Materials."

3.10.2 Environmental Setting

SACOG is a voluntary association of governments, a federally designated MPO, and a state-designated regional transportation planning agency (RTPA). Member jurisdictions are: the County of El Dorado (including the City of Placerville); the County of Placer (including the cities of Auburn, Colfax, Lincoln, Rocklin, and Roseville and the Town of Loomis); the County of Sacramento (including the cities of Citrus Heights, Elk Grove, Folsom, Galt, Isleton, Rancho Cordova, and Sacramento); the County of Sutter (including the cities of Live Oak and Yuba City); the County of Yolo (including the cities of Davis, West Sacramento, Winters, and Woodland); and the County of Yuba (including the cities of Marysville and Wheatland). SACOG's designated RTPA status does not include the unincorporated areas and cities within El Dorado and Placer counties which have their own RTPAs: the El Dorado County Transportation Commission and the Placer County Transportation Planning Agency.

The plan area encompasses the entire 28-jurisdiction area (except for the portions of El Dorado and Placer counties within the Lake Tahoe Basin), totaling approximately 6,193 square miles (3,963,626 acres). See Figure 2-1 in Chapter 2, "Project Description," for a map of the plan area, which spans a diverse geography, including productive agricultural lands, the rapidly growing urban core and foothill communities, and the sparsely populated forestlands of the western Sierra Nevada Mountains. Existing development is heavily concentrated near the geographic center of the region in Sacramento County and southwest Placer County, with outlying development occurring mainly along major freeways such as Interstate 80 (I-80), I-5, US 50, and State Route (SR) 99. Near the edges of the region, outside of some small incorporated cities, most land is either productive agricultural land (Yolo, Sutter, and southwest Sacramento counties) or protected forests and open space in the Sierra Nevada foothills (eastern Placer, El Dorado, and Yuba counties).

The plan area also includes lands held by the federal government and managed by the US Fish and Wildlife Service (USFWS) and the US Bureau of Land Management (BLM), tribal lands managed by sovereign tribal governments, and State property managed by the State Lands Commission. USFS manages the two national forests in the plan area: the Eldorado National Forest (El Dorado and Placer counties), the Tahoe National Forest (Placer and Yuba counties), and Plumas National Forest (northeast tip of Yuba County. USFWS also manages the Sutter National Wildlife Refuge near Yuba City and the Stone Lakes National Wildlife Refuge in Sacramento County. BLM manages several special, critical environmental concern, and other management areas within the region, including Cronan Ranch, Greenwood, Kanaka Valley, Norton Ravine, and Pine Hill Preserve in El Dorado County; Cosumnes River Preserve in the Sacramento Delta; and the South Yuba Wild and Scenic River Recreation Area in Yuba County. BLM governs the uses allowed on land that it manages, striving to balance environmental protection and conservation goals with other uses such as recreation and grazing.

Tribal sovereign lands within the plan area include those of the Shingle Springs Band of Miwok Indians in El Dorado County, United Auburn Indian Community of the Auburn Rancheria in Placer County, Wilton Miwok Indians in Sacramento County, Estom Yumeka Maidu Tribe of the Enterprise Rancheria in Sutter and Yuba counties, and Yocha Dehe Wintun Nation in Yolo County. Under federal law, tribes are deemed domestic dependent nations and, as such, exercise a limited sovereignty that is subject to congressional authority.

The State Lands Commission is responsible for managing lands owned by the state, including lands that the state has received from the federal government (PRC Section 6370). These lands total more than 4 million acres and include tide and submerged lands, swamp and overflow lands, the beds of navigable waterways, and state school lands. The State Lands Commission has a legal responsibility for protecting the ecological and Public Trust values associated with the state's sovereign lands, including the use of these lands for habitat preservation, open space, and recreation.

EXISTING LAND USES BY COUNTY

The discussion below briefly summarizes the land use and development patterns in each county in the plan area. Table 3.10-1 provides an inventory of existing development types in each county. Residential uses are the primary development type identified in each of the counties. Additional details about existing population, housing, and employment in each jurisdiction are provided in provided in Section 3.13, "Population and Housing."

Table 3.10-1 Existing Land Uses in the Plan Area by County

Development Types	El Dorado County	Placer County	Sacramento County	Sutter County	Yolo County	Yuba County	Regional Total
Residential (acres)	195,370	133,889	129,026	7,023	36,732	85,682	**587,722**
Mixed Use (acres)	0	12	37	34	9	5	**97**
Office and Commercial (acres)	1,842	5,171	18,327	974	2,279	839	**29,433**
Industrial (acres)	1,359	4,378	19,679	1,476	6,229	3,771	**36,893**
Public (acres)	5,070	7,196	21,652	1,578	5,718	25,025	**66,239**
Total (acres)	**203,641**	**150,645**	**188,721**	**11,086**	**50,967**	**115,323**	**720,384**

Notes: Existing land uses reflect January 2020 data; Excludes Agriculture, Open Space, Parks, Recreation, and Vacant land estimate (land that is not developed in the 2025 Blueprint but is available for development based on currently adopted general plans and specific plans). The Public development type includes airport, civic, college, schools, military, and public/quasi-public uses.

Source: Data compiled by SACOG in 2025.

EL DORADO COUNTY

El Dorado County extends from the Sacramento County line on the west to the summit of the Sierra Nevada Mountains on the east. From west to east, the geography of El Dorado County progresses from foothill to mountainous terrain. Existing land uses primarily include residential, commercial, and industrial development, and rural and agricultural lands used for agricultural production, resource extraction, open space, and recreation. The only incorporated city in the county within the plan area is Placerville (the Lake Tahoe Basin, including South Lake Tahoe, is not part of the plan area). Residential development is primarily concentrated on the west side of the county in clusters along US 50, including Placerville and the unincorporated communities of El Dorado Hills, El Dorado, Diamond Springs, and Cameron Park, and throughout several rural communities. El Dorado Hills and Cameron Park are more recently urbanized areas of the county, where housing and commercial development are suburban in nature. Camino and Pollock Pines are examples of more rural communities that include housing and commercial development. Commercial development has generally followed the same growth patterns as residential development, clustering along US 50, SR 49, and SR 193. A newer business park in El Dorado Hills south of US 50 and just east of the El Dorado-Sacramento County border has generated some job growth outside of the traditional jobs center in the city of Placerville. Additional employment clusters exist in the unincorporated county within Diamond Springs and Shingle Springs. Agricultural and forestlands make up the largest percentage of undeveloped lands. As described above, forestlands are managed by the USFWS and the BLM (which manages forested lands in the American and Cosumnes River canyons).

PLACER COUNTY

With a similar geography to El Dorado County, the unincorporated portion of Placer County is predominantly rural communities. The majority of the population lives in the suburban southwest portion of the county where residential development has primarily occurred in and around the fast-growing cities of Roseville, Rocklin, and Lincoln. Residential development in these cities is predominantly single-family, although there are some medium- and high-density attached dwelling units. Outside of these cities, suburban residential uses are concentrated along the I-80 corridor in the incorporated cities of Loomis, Auburn, Colfax, and the community of Granite Bay. The predominant land use in these cities is low-density residential, though Auburn has a concentration of employment uses due to its

role as the county seat of government. The highest concentrations of commercial, light industrial, and office uses in the county fall within the cities of Roseville, Rocklin, and Lincoln. Industrial and heavy commercial uses are also scattered in various locations outside the incorporated urban boundaries, mainly along I-80 near Loomis, Newcastle, Auburn, Foresthill, and Weimar, and near SR 49 in Auburn and SR 174 in Colfax.

Non-urban uses within Placer County include agricultural, resource extractive (timber and mining), public lands, and open space. A large portion of the county, particularly in the eastern half, is under public ownership. The largest amount of public land within Placer County is under the control of BLM. Smaller amounts of land in central Placer County are under the jurisdiction of the USFS and the Bureau of Reclamation.

SACRAMENTO COUNTY

Sacramento County lies at the geographic center of the region and contains both agricultural land uses and the most urbanized areas of the region. The geographic boundaries of the county include several unincorporated communities and seven incorporated cities, including Citrus Heights, Elk Grove, Folsom, Galt, Isleton, Rancho Cordova, and Sacramento. The county has established two growth boundaries to promote orderly growth and the efficient extension of infrastructure and the provision of urban services. The Urban Services Boundary (USB) delineates the ultimate growth boundary for the unincorporated area, where county services would be provided and if the USB is amended. The Urban Policy Area delineates the area within the USB expected to receive county services in the near term.

The highest densities of employment and residential uses are located in the urban core of the city of Sacramento. Two of the three regional employment centers in the plan area are in Sacramento County: downtown Sacramento and the employment center along the US 50 corridor in the cities of Rancho Cordova and Folsom. Land uses north of the American River are primarily suburban residential with concentrations of commercial and employment uses along major transportation routes. The southern half of the county, including south Sacramento, the unincorporated Vineyard community, and the cities of Elk Grove and Galt, are predominantly residential. The latter three areas also have fairly low suburban to rural densities. The Cosumnes River flood plain and existing agricultural operations separate the cities of Elk Grove and Galt. The southeast county (outside of existing cities and the USB) is in agricultural use but is identified for future development in a series of specific and master plans.

SUTTER COUNTY

Land use in Sutter County is predominantly agricultural, with agriculture as the county's primary industry. Yuba City and Live Oak are the two incorporated cities in Sutter County, which are suburban and rural in their current land use pattern. Unincorporated rural communities in the county include Meridian, Nicolaus, East Nicolaus, Rio Oso, Robbins, Sutter, Trowbridge, and Tudor. Historically, general plan policy in Sutter County has encouraged agricultural preservation in the unincorporated areas of the county and directed new development adjacent to and within the county's two cities and other clearly defined and comprehensively planned development areas.

An exception is the Sutter Pointe Specific Plan (approved by the Board of Supervisors on June 30, 2009), which encompasses approximately 7,528 acres of land in south Sutter County and envisions the eventual establishment of a new city. The project proposes a diverse mix of land uses, including employment centers, a variety of housing types, retail shopping villages, recreational amenities, schools, community services, supporting on- and off-site infrastructure, roadway improvements, open space and various public uses. The first phase of development was approved in 2020.

YOLO COUNTY

Yolo County borders Sacramento and Sutter counties along the Sacramento River. Agriculture is Yolo County's primary industry. The eastern two-thirds of the County consists of nearly level alluvial fans, flat plains, and basins, while the western third is largely composed of rolling terraces and steep uplands used for dry-farmed grain and range. The elevation ranges from slightly below sea level near the Sacramento River around Clarksburg to 3,000 feet

along the ridge of the western mountains. About 88 percent of the population lives in the County's four cities (Davis, West Sacramento, Woodland, and Winters). Yolo County and its cities operate under an agriculture preservation policy that directs urban development into existing urban areas (including the many small rural towns within the unincorporated area). The cities of Davis, Woodland, and West Sacramento have received most of this growth. Additionally, the cities of Davis and Woodland have growth control measures limiting and containing growth.

YUBA COUNTY

Yuba County is located in the northern Sacramento Valley, approximately 40 miles north of the City of Sacramento. Its boundaries stretch from the farms and orchards of the valley to the timberlands of the Sierras. Historically, Yuba County has been primarily rural and agricultural. However, the southern SR 70 corridor in unincorporated Yuba County has experienced suburban residential growth since approval of the Plumas Lake Specific Plan in the early 2000s. Similarly, the SR 65 corridor running through the city of Wheatland resulted in residential growth in the city. The city of Marysville maintains its compact footprint due, in large part, to flood constraints.

EXISTING DEVELOPMENT

As presented below in Table 3.10-2, the 2025 Blueprint classified the plan area into community types to understand the existing development pattern for the region. The community type framework designates land into one of the following five community types based on location, land use composition, proximity to employment and services, and local plans for expansion and preservation. Table 3.10-3 identifies the existing development in the plan area by community type.

- Center and Corridor Communities: typically have more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the communities surrounding them. This designation includes nearly half (46 percent) of the employment in the plan area but provides only 13 percent of the housing.
- Established Communities: typically made up of existing low- to medium-density residential neighborhoods, office and industrial parks, or commercial strip centers. This designation includes most (75 percent) of the housing in the plan area and approximately half of the employment opportunities.
- Developing Communities: typically, though not always, situated on vacant land at the edge of existing urban or suburban development, Developing Communities are the next increment of urban expansion. Developing Communities do not currently contribute substantially to regional housing or employment.
- Rural Residential Communities: typically located outside of urbanized areas and designated in local land use plans for rural residential development. These areas provide nearly 9 percent of the region's housing and less than 3 percent of the employment.
- Agricultural and Natural Lands: areas dominated by commercial agriculture, forestry, resource conservation, mining, flood protection, or a combination of these uses. Though there is existing development in these areas (e.g., primarily farm homes, agricultural-related uses, public lands such as wastewater treatment facilities), total developed acres in this community type is included in Established and Rural Residential communities. Some lands within the Lands Not Identified for Development community type are within spheres of influence and/or urban growth boundaries of local jurisdictions and will be targeted for urbanization over the longer term (beyond 2050).

Table 3.10-2 Existing Housing and Employment by Community Type

Community Type	Dwelling Units in 2020[1]	Percent of Total Dwelling Units in 2020	Employees in 2020	Percent of Total Employees in 2020
Center and Corridor Communities	126,637	13%	490,225	43%
Established Communities	718,086	75%	580,406	51%
Developing Communities	23,766	3%	15,268	1%
Rural Residential Communities	82,036	9%	37,326	3%
Region Total[2]	**951,615**	**100%**	**1,127,549**	**100%**

[1] Due to different protocols among GIS models for tallying spatial data, housing unit numbers in this Draft EIR may differ marginally from those reported in the 2025 Blueprint.

[2] Totals may not match due to rounding.

Source: Data compiled by SACOG, 2025 Blueprint Land Use Forecast, May 2025.

Table 3.10-3 Existing Land Uses in the Plan Area by Community Type

Development Types	Centers and Corridors	Established Communities	Developing Communities	Rural Residential	Total
Residential (acres)	10,763	147,757	16,529	412,037	**587,085**
Mixed Use (acres)	204	495	21	13	**734**
Office and Commercial (acres)	10,006	11,197	974	7,255	**29,433**
Industrial (acres)	4,270	15,595	8,186	8,842	**36,893**
Public (acres)	4,712	49,028	1,839	10,660	**66,239**
Total	**29,955**	**224,073**	**27,549**	**438,808**	**720,384**

Notes: Excludes Agriculture, Open Space, Parks, Recreation, and Vacant land estimate (land that is not developed in the 2025 Blueprint but is available for development based on currently adopted general plans and specific plans.)

Existing development in the Lands Not Identified for Development community type (primarily farm homes, agricultural-related uses, public lands etc.) was included in Developing and Rural Residential communities totals.

Existing land uses reflect the January 2020 base year data used in the 2025 Blueprint.

Source: Data compiled by SACOG in 2025.

In addition, SACOG has identified High Frequency Transit Areas (HFTAs), which are areas of the region within 0.5 mile of a major transit stop (i.e., existing or planned bus, light rail, street car, or train station or the intersection of two 20-minute frequency bus routes) or high-quality transit corridor (i.e., a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours). HFTAs are considered an overlay geography and do not necessarily correspond directly to a specific community type. HFTAs have been identified in Placer, Sacramento, and Yolo Counties. Table 3.10-4, below, summaries the existing housing and employment in these areas. The HFTA framework is described in greater detail in Chapter 2, "Project Description."

Table 3.10-4 Existing Housing and Employment within High Frequency Transit Areas

High Frequency Transit Areas (HFTAs)	Existing Dwelling Units in 2020	Existing Employees in 2020
Placer HFTAs	45,197	90,433
Sacramento HFTAs	385,082	525,442
Yolo HFTAs	42,094	60,680
All HFTAs	472,373	676,555

Source: Data compiled by SACOG, 2025 Blueprint Land Use Forecast, May 2025.

3.10.3 Environmental Analysis

METHODOLOGY

The 2025 Blueprint forecasts the regional growth pattern that is anticipated to be realized through 2050 based in part on the approved and planned projects in the adopted land use plans of the numerous jurisdictions within the plan area. The 2025 Blueprint is evaluated to determine whether the regional growth pattern and planned transportation improvements of the 2025 Blueprint would physically divide an established community and to confirm consistency with the regulatory requirements for an SCS. The analysis uses an existing conditions baseline. Where appropriate, 2020 data is used, as it is the most recent year for which comprehensive land use and demographic data are available for the plan area.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the project could have a significant adverse effect related to land use and planning if it would:

- physically divide an established community; or
- cause a significant environmental impact due to conflict with the SCS requirements of SB 375 or the Delta Plan or LURMP.

ISSUES NOT DISCUSSED FURTHER

All of the topics identified in the significance criteria above are addressed in the following analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.10-1: Physically Divide an Existing Community

Regional Growth and Land Use Change

The 2025 Blueprint encourages growth within existing communities (referred to as Center and Corridor Communities and Established Communities in the 2025 Blueprint, see Table 3.10-5). Growth in housing across the plan area is forecast to be roughly evenly split between Center and Corridor Communities, Established Communities, and Developing Communities. Because the majority of development within Center and Corridor Communities and Established Communities would occur within already developed areas and because the projected land use pattern would expand the capacity of these community types to support new population growth, the projected land use pattern in these communities is not expected to physically divide established communities.

The development of new housing units and employment land uses within these existing communities would typically occur on vacant or underutilized sites such as surface parking lots, and low-rise commercial strips, industrial buildings, and warehouses; and would also result from the conversion of low-density single-family housing properties to multi-family residences. Infill development would occur in accordance with the adopted general plans and other subregional or community plans, as well as their zoning and subdivision ordinances. Adopted general plans and subregional or community plans for Center and Corridor Communities and Established Communities routinely prevent developments that would physically divide communities and often include policies to remove existing physical barriers. In Developing Communities that do not generally support substantial existing development or residential uses (see Table 3.1-2), the master planning process would typically address the potential for effects on existing land uses.

Table 3.10-5 2025 Blueprint Housing Growth by Community Type

Community Type	Dwelling Units in 2020	Percent of Total Dwelling Units in 2020	New Dwelling Units Between 2020 and 2050	Percent of Total New Dwelling Units Between 2020 and 2050	Dwelling Units in 2050	Percent of Total Dwelling Units in 2050
Center and Corridor Communities	126,637	13%	110,148	33%	236,785	19%
Established Communities	718,086	75%	76,233	31%	794,319	65%
Developing Communities	23,767	3%	88,756	34%	112,522	9%
Rural Residential Communities	82,036	9%	2,881	1%	84,917	7%
Lands Not Identified for Development	1,090	<1%	0	0%	1,090	<1%
Region Total	**951,615**	**100%**	**278,018**	**100%**	**1,228,543**	**100%**

Source: Data compiled by SACOG in 2025.

The 2025 Blueprint would promote connectivity within an existing community by siting land uses of similar character and nature in a more compact and mixed-use pattern. Thus, it is reasonably foreseeable that the Development Pattern would result in beneficial impacts related to the connectivity of an existing community, rather than an adverse effect.

Transportation Network Improvements and Programs

The 2025 Blueprint includes a variety of transportation projects and programs, including regional transit projects, local transit projects, road pricing improvements, and highway and roadway improvements. The plan supports planning efforts for locally sponsored traffic calming and alternative transportation initiatives, such as paths, trails, overcrossings, and bicycle plans that foster improved neighborhoods and community connections. The focus for planned transportation improvements is on road maintenance, safety enhancements, other roadway operational improvements, and targeted capacity improvements to existing facilities that accommodate increased travel between urban areas.

In existing developed areas, where the majority of roadway improvements would occur, roadway infrastructure is already a dominant feature of the landscape, and improvements to existing roadway facilities that occur in or adjacent to the existing rights of way would not create new physical division in existing communities. Some projects in the 2025 Blueprint could improve or expand interconnections between neighborhoods and communities that are currently separated by major transportation corridors. Examples include improved or new rail line crossings, bicycle/pedestrian overcrossings of freeways, and urban trail and pathway projects. Additionally, many proposed projects, such as expansion of transit services, are intended to improve mobility and accessibility and may, as a result, improve community connectivity.

Summary

Implementation of the land use strategies would result in future development being integrated into existing communities along the existing transportation network and would, therefore, not physically divide established communities. In addition, many proposed transportation projects, such as expansion of transit services or the building of active transportation infrastructure, are intended to improve mobility and accessibility and may, as a result, improve community connectivity. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.10-2: Cause a Significant Environmental Impact due to Conflict with the SCS Requirements of SB 375

Regional Growth and Land Use Change/Transportation Network Improvements and Programs

As described above and in Chapter 1, "Introduction," Section 65080(b)(2)(B) of the California Government Code establishes the following requirements for an SCS:

- Identify the general location of uses, residential densities, and building intensities within the region.
- Identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period of the regional transportation plan taking into account net migration into the region, population growth, household formation, and employment growth.
- Identify areas within the region sufficient to house an 8-year projection of the regional housing need for the region pursuant to Section 65584 of the Government Code.
- Identify a transportation network to service the transportation needs of the region.
- Gather and consider the best practically available scientific information regarding resource areas and farmland in the region as defined in subdivisions (a) and (b) of Section 65080.01 of the Government Code.
- Consider the state housing goals specified in Sections 65580 and 65581 of the Government Code.
- Set forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the GHG emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the GHG emission reduction targets approved by the state board.
- Allow the regional transportation plan to comply with Section 176 of the federal Clean Air Act (42 USC Section 7506).

The following analysis briefly evaluates the plan's consistency with other SCS requirements. The land use and transportation components are evaluated together to better align with the overall SCS requirements to prepare an integrated land use and transportation plan. The potential for the 2025 Blueprint to conflict with the GHG emissions targets established by SB 375 are evaluated further in Section 3.7, "Greenhouse Gas Emissions and Energy."

Identify the General Location of Uses, Residential Densities, and Building Intensities Within the Region

SB 375 requires that MPOs adopt an SCS that forecasts the amount and location of growth, including a detailed allocation of land uses addressing regional housing need, transportation demand, and natural resources (Government Code Section 65080[b][2][B]). The 2025 Blueprint identifies the general location of uses, residential densities, and building intensities within the region in the 2025 Blueprint Land Use Forecast, described in detail in Chapter 2, "Project Description." The development forecast identifies housing by density and type; employment uses by industry, building intensity, and number of employees; and other uses including agriculture, open space, and recreation areas by the following geographic area types: county, jurisdiction, community type, and HFTA.

Identify Areas of the Region Sufficient to House All the Population of the Region

As described in Chapter 2, "Project Description," SACOG's regional forecast methodology identifies the total employment expected to occur in the region and the population that would occur in conjunction with that employment growth, taking into account net migration into the region, population growth within the region, and household formation. New households are converted into housing unit demand for the forecasted workers and residents in the region. Thus, the SCS identifies areas of the region sufficient to house the entire population of the region. The SCS does not assume development on all urban-designated land, because the sum of all local land use plans, adopted and proposed, yields an amount of employment and housing growth that exceeds the total employment and housing growth forecast for the region to 2050.

Providing a variety of housing options - apartments, condominiums, townhouses, and single-family detached homes on varying lot sizes - creates opportunities for a variety of people including families, singles, seniors, and people living with special needs. The diverse mix of housing in the 2025 Blueprint provides more people with access to housing options that fit their circumstances and preferences. See Section 3.13, "Population and Housing," for more information and analysis of dwelling units and housing types in the 2025 Blueprint.

Identify Areas Within the Region Sufficient to House an 8-year Projection of the Regional Housing Need

State law requires that SACOG consider state housing goals and identify areas within the region sufficient to meet the regional housing needs allocation (RHNA) for the next 8 years. The RHNA is the state-mandated process to identify the total number of housing units (by affordability level) that every city and county must accommodate in Housing Elements.

The RHNA allocates each jurisdiction's "fair share" of the region's projected housing needs over the housing element planning period (2021-2029) for each of four household income groups as compared to the area median income (AMI) and as defined by the California Department of Housing and Community Development (i.e., extremely low-income or less than 30 percent of the AMI, very low-income or less than 50 percent of the AMI, low-income or less than 80 percent of the AMI, and moderate-income or less than 120 percent of the AMI). The RHNA is used by jurisdictions when updating their housing elements as the basis for assuring that adequate sites and zoning are available to accommodate the allocation.

SB 375 requires that the RHNA be consistent with the SCS and that the SCS identify areas sufficient to house the projected regional housing need for the region, since in most of California these documents are both prepared by the same regional organization. To ensure this consistency, SB 375 aligned the RHNA process with the SCS update, which has extended the RHNA and Housing Element update cycle in the SACOG region from 5 years to 8 years. Because RHNA updates are required every 8 years and MTP/SCS updates are required every 4 years, the SCS and RHNA update process are linked during every other SCS cycle.

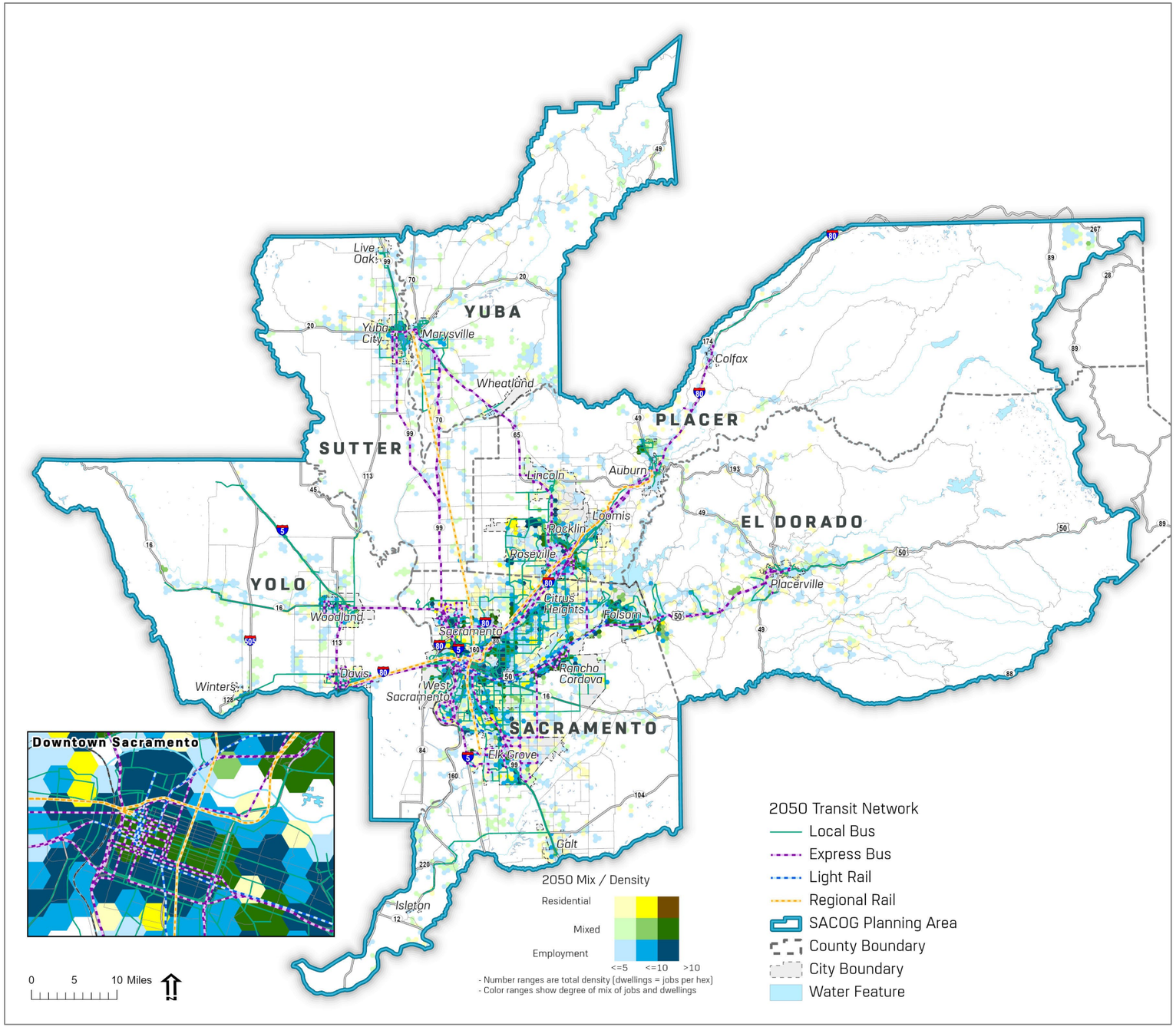
The 2025 Blueprint plans for enough housing to meet the needs of the region over the 25 years the plan covers. State statute requires that housing units allocated through RHNA are consistent with the development pattern included in the SCS. The Development Pattern in the 2025 Blueprint would be the starting point for the RHNA methodology of allocating units to jurisdictions. By using the Regional Growth Projection as the basis for total RHNA calculations by jurisdiction, SACOG can effectively ensure consistency across these two planning efforts.

Identify a Transportation Network to Service the Transportation Needs of the Region

SB 375 requires that MPOs adopt an RTP directed at achieving a coordinated and balanced regional transportation system including, but not limited to, mass transportation, highway, railroad, maritime, bicycle, pedestrian, goods movement, and aviation facilities and services. The RTP must be a fiscally and time-constrained plan with forecasted transportation improvements consistent with the amount of forecasted growth for the region. Additionally, state statutes require that RTPs serve as the foundation of the Federal Transportation Improvement Program prepared by MPOs, which identify the next 4 years of transportation projects to be funded for construction.

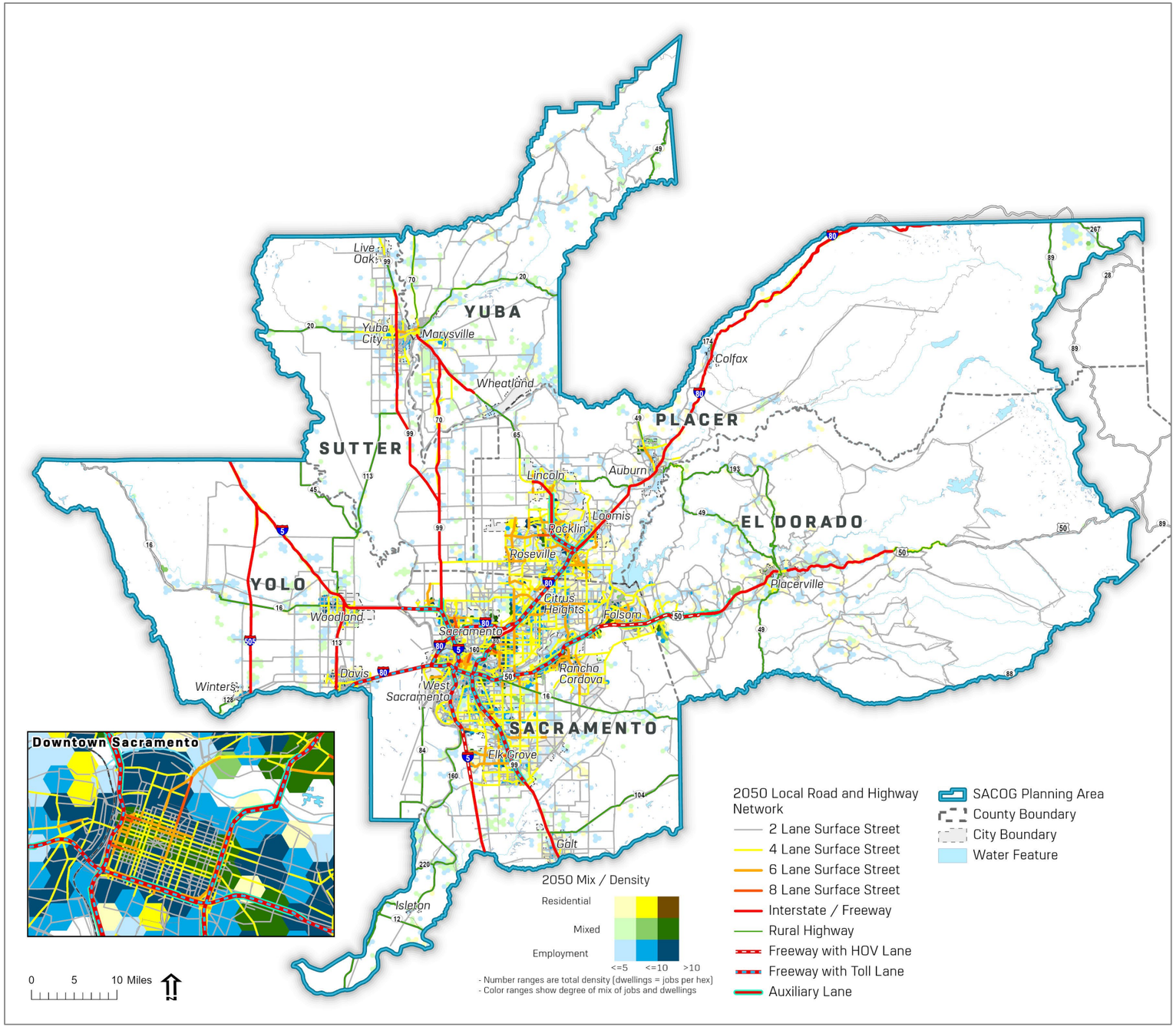
The transportation network of the 2025 Blueprint is identified in Figures 3.10-1, 3.10-2, and 3.10-3, and is described in Chapter 2, "Project Description." The transportation network was tailored to the Development Pattern to achieve the fiscal goals, system performance, and GHG reduction objectives of the plan. The 2025 Blueprint includes 702 new lane miles of highways, arterials, and expressways in the plan area (see Table 2-11). The 2025 Blueprint includes 117 miles of freeway high occupancy vehicle lanes, which are intended to preserve faster, more reliable travel options for travelers when needed; and to raise revenue to offset costs of building, maintaining and operating the facilities, and to provide subsidies for non-auto options like express buses in the corridors. The 2025 Blueprint also provides maintenance, major reconstruction, and rehabilitation activities on the existing road and highway network.

The list of transportation projects included in the plan strikes a balance between a transportation network that will efficiently serve the projected regional growth for the plan, manage congestion, provide transportation choice to residents, improve safety, and to provide the best path for achieving the policy goals in the 2025 Blueprint and the GHG emissions target. The road and highway capacity projects in the plan are intended to serve the projected jobs and housing growth. Projects are included for their potential to provide multimodal benefits, improve safety, alleviate existing or forecasted bottlenecks, connect housing to jobs, and meet future projected travel volumes in a way that manages, rather than eliminates, congestion. The full list of transportation investments is included as Appendix A to the 2025 Blueprint.



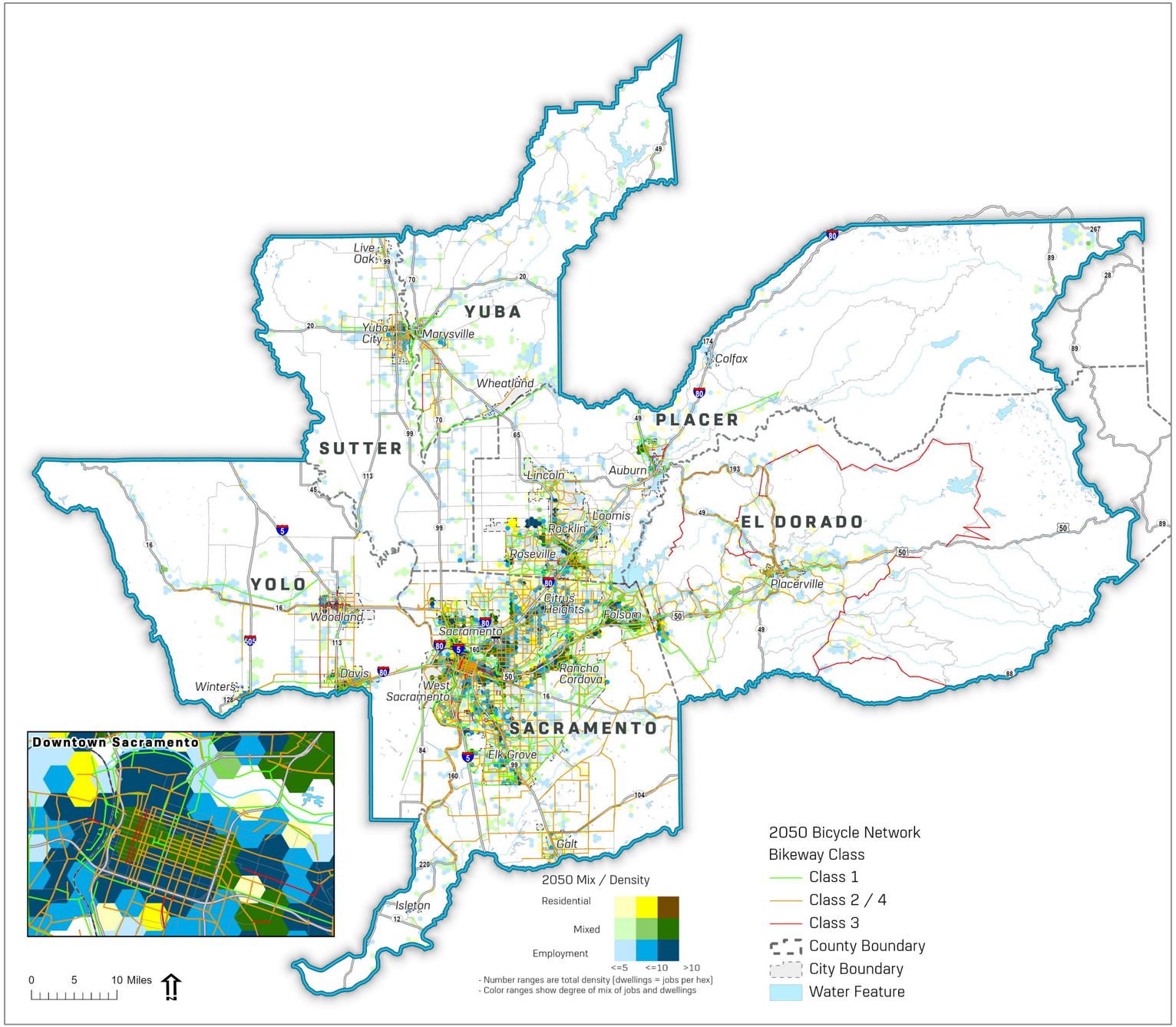
Source: Prepared by SACOG in 2025.

Figure 3.10-1 2050 Transit Network with 2050 Mixed Densities



Source: Prepared by SACOG in 2025.

Figure 3.10-2 2050 Local Road and Highway Network with 2050 Mixed Densities



Source: Prepared by SACOG in 2025.

Figure 3.10-3 2050 Class I, II, and III Bicycle Network with 2050 Mixed Densities

Gather and Consider the Best Practically Available Scientific Information Regarding Resource Areas and Farmland in the Region as Defined in Subdivisions (a) and (b) of SECTION 65080.01 of the Government Code

SB 375 requires MPOs to gather and consider information about the following natural resource areas and farmland in the SCS:

- open space or habitat areas protected by NCCPs, HCPS, other natural resource protection plans;
- habitat for species identified as candidate, fully protected, sensitive, or species of special status by local, state, or federal agencies or protected by the federal or state endangered species acts (Fish & Game Code, Section 2050 et seq.), or the Native Plant Protection Act;
- lands subject to conservation or agricultural easements for conservation or agricultural purposes;
- areas designated for open space or agricultural uses in adopted open space elements or agricultural elements of local plans or ordinances;
- areas containing biological resources as described in Appendix G of the State CEQA Guidelines that may be significantly affected by the SCS;
- an area subject to flooding where a development project would not, at the time of development in the judgment of the agency, meet the requirements of the National Flood Insurance Program or where the area is subject to more protective provisions of state law or local ordinance; and
- farmland outside all existing city spheres of influence or city limits as of January 2008 and is one of the following: prime or unique farmland or farmland of statewide importance.

The Development Pattern in the 2025 Blueprint was developed in consultation with local jurisdictions and with consideration of the above-listed resources. As discussed in Section 3.4, "Biological Resources," each of the counties in the plan area are engaged in habitat and/or natural communities planning, which has involved extensive inventorying and mapping of resources. SACOG consulted with cities and counties, LAFCos, state and federal resource agencies, and other stakeholders on urban development and natural resource issues within each local jurisdiction. This included collecting information on agricultural and open space protection policies, the status of flood mapping and implications for future development, the status of habitat and/or natural communities planning, and the status of federal resource permits, including those required under Section 404 and Section 401 of Clean Water Act (33 USC Section 1251 et seq.) and Section 1602 of the Fish and Game Code where applicable.

This level of data collection allowed SACOG to consider the limitations on urban growth due to various natural resource regulations and policies, as well as the impacts of urban growth on natural resources. Natural resource data was compared to the Development Pattern to determine the amount of land potentially affected by the growth planned for 2050. The results of this analysis revealed that implementation of the land use and transportation elements of the 2025 Blueprint could result in impacts to agricultural land, open space resources, and biological resources including habitat, fish, and wildlife. However, SACOG also acknowledges that specific projects proposed in the future would be subject to federal, state, and local permits related to natural resource impacts (e.g., USACE Section 404 permit, RWQCB Section 401 certification, and California Department of Fish and Wildlife Streambed Alteration Agreement) and must demonstrate consistency with, and satisfy mitigation requirements included in, any adopted HCP/NCCP. In addition to the above-noted consideration of natural resources and farmland, this Draft EIR analyzes the potential impacts of the 2025 Blueprint on the above resources in Section 3.2, "Agriculture and Forestry Resources," Section 3.4, "Biological Resources," and Section 3.9, "Hydrology and Water Quality."

Consider the State Housing Goals Specified in Sections 65580 and 65581 of the Government Code

State law recognizes the availability of housing, including decent housing conditions, farmworker housing, a diverse mix of housing types, and housing affordability for all economic segments of the community, as of vital statewide importance. By providing a diverse mix of housing choice, more people have access to housing options that fit their circumstances and preferences. Since the beginning of the Blueprint project, SACOG has used four categories to describe housing product mix:

- Rural Residential: single-family detached homes built at densities less than 1 dwelling unit per acre.
- Large-Lot Single-Family: single-family detached homes built at densities between one and eight dwelling units per acre, defined by SACOG as very low to low density.
- Small-Lot Single-Family: single-family detached homes built at densities between eight and 25 dwelling units per acre, defined by SACOG as medium to medium-high density.
- Attached: Single-family and multi-family homes including duplexes, triplexes, apartments, condominiums, townhomes, row houses, and half-plexes, built at densities from greater than eight to more than 50 dwelling units per acre, defined by SACOG as high density.

The 2025 Blueprint acknowledges that changing demographics will affect the types of housing that the region's residents need, want, and critically, can afford. While the region would continue to be a majority single family residences in 2050, the 2025 Blueprint anticipates an increasing demand for single family homes on smaller lots and attached housing like duplexes, townhomes, accessory dwelling units, and apartments. Part of this shift in demand is due to need, and some of it is due to changing preferences. As housing prices have increased, providing more smaller homes as a complement to the existing supply of large homes would improve the region's ability to house more of its new households and attract members of a highly skilled workforce, many of whom are looking for vibrant walkable communities.

Set forth a Forecasted Development Pattern for the Region, Which, When Integrated with the Transportation Network, and Other Transportation Measures and Policies, Will Reduce the GHG Emissions from Automobiles and Light Trucks to Achieve the GHG Reduction Targets Approved by the CARB

For the 2025 Blueprint, CARB assigned SACOG a target of reducing per capita GHG emissions by 19 percent compared to a 2005 baseline. As described in Chapter 2, "Project Description," SACOG developed a Draft Preferred Scenario of land use growth and planned transportation improvement assumptions based on the SACOG board direction that considered adopted and proposed plans in each jurisdiction, market conditions, environmental constraints, and availability of funds for transportation and other infrastructure. Based on this framework, SACOG developed the 2025 Blueprint, which is designed to meet the GHG targets set by CARB.

In support of the Blueprint principles, one of the primary strategies to achieve GHG emission reduction targets is to increase the number of people – both residents and employees – who have access to high-quality transit. As described in Chapter 2 (see Table 2-15), the plan is anticipated to increase access to transit (measured as the number of homes within 0.5 mile of high frequency transit) by 426 percent. Access to employment is also expected to increase, with 182 percent more jobs within a 30-minute transit ride of workers' homes.

Based on the transportation modeling conducted for the plan and summarized in Chapter 2 and Section 3.7 of this Draft EIR, the 2025 Blueprint is anticipated to achieve the 19 percent per capita GHG reduction target set by CARB to reduce GHG emissions associated with transportation. CARB must ultimately review and approve SACOG's GHG calculation methodology and confirm that the GHG reduction strategies, if implemented, would achieve the GHG reductions described above.

Allow the Regional Transportation Plan to Comply with Section 176 of the Federal Clean Air Act

As part of the proposed 2025 Blueprint, SACOG must examine the long-term air quality impacts of the transportation system and ensure that it is compatible with the region's air quality goals. The conformity demonstration requirement is described in the Clean Air Act Section 176(c) and EPA's transportation conformity regulations (40 CFR 93 Subpart A). Transportation conformity is a way to ensure that Federal funding and approval goes to those transportation activities that are consistent with air quality goals set for ozone and particulate matter. The determination of conformity must be based on the most recent estimates of emissions, and those estimates must be determined from the most recent population, employment, travel and congestion estimates as determined by the MPO or other agency authorized to make such estimates (42 USC Section 7506). Section 3.3, "Air Quality," provides a full evaluation of the potential for the 2025 Blueprint to conflict with air quality plans based, in part, on the conformity analysis prepared for the plan.

The forecasted emissions for ozone and respirable particulate matter associated with the 2025 Blueprint are within the conformity budgets identified within the existing plans for each milestone year. The forecasted emissions for fine particulate matter associated with the 2025 Blueprint pass all interim emissions tests for all milestone years. Achieving conformity provides the link between air quality and land use/transportation planning by linking the SIP and the 2025 Blueprint. More prescriptively, the SIPs in the plan area provide the strategies that would be used to attain and maintain the National Ambient Air Quality Standards. Through conformity, the 2025 Blueprint demonstrates that the region's land use and transportation system implement this strategy.

Summary

The 2025 Blueprint complies with all eight of the SB 375 objectives. Therefore, the 2025 Blueprint would not cause a significant environmental impact due to a conflict with the SCS requirements included in SB 375. This impact would be **less than significant**.

Mitigation Measures

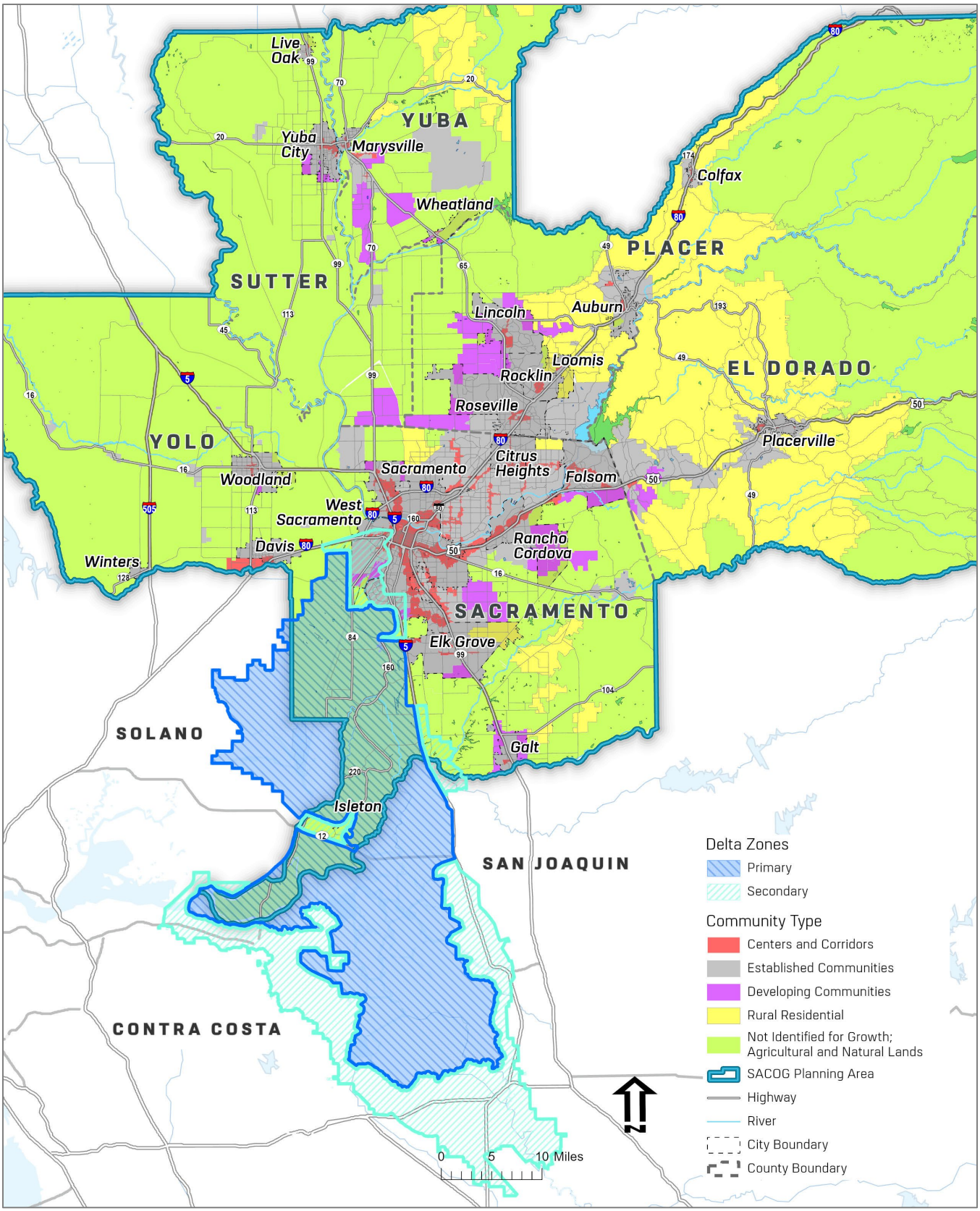
No mitigation is required for this impact.

Impact 3.10-3: Cause a Significant Environmental Impact due to Conflict with the Provisions of the Delta Plan or the LURMP

Regional Growth and Land Use Change

The 2025 Blueprint generally directs growth to urbanized areas, which would limit the conversion of undeveloped or agricultural lands to urban uses. SACOG does not have land use authority to adopt local land use plans or approve local land use projects. However, jurisdictions with land in the Primary Zone (i.e., City of Sacramento, Sacramento County, Yolo County, City of West Sacramento) are required by PRC Section 29763 to adopt general plans with land uses consistent with the goals and policies in the LURMP, subject to review by the DPC. Therefore, subsequent projects within the plan area that fall within the LURMP boundaries would be required to demonstrate consistency with the LURMP and satisfy mitigation requirements. Except for the Delta Legacy Communities (designated as Established Communities and Developing Communities), the Primary Zone of the Delta is located within Lands Not Identified for Development, where no growth and only minimal transportation improvements are planned (see Figure 3.10-4). Therefore, consistent with the LURMP, the priority land use of areas in the Primary Zone in the 2025 Blueprint would continue to be oriented toward agriculture and open space.

The Development Pattern of the 2025 Blueprint includes Established Communities and Developing Communities (in West Sacramento) in the Secondary Zone of the Delta. As described above, the Delta Plan (CCR Title 23 Section 5010) limits new residential, commercial, or industrial development to areas that city or county general plans designated for that type of development as of May 2013. The Developing Communities are located between and adjacent to Established Communities in the City of West Sacramento (roughly between the Deep Water Ship Channel and the Sacramento River) and are consistent with the City's adopted General Plan Land Use Diagram. This development is not anticipated to induce additional residential, commercial, or industrial development within the Delta. No development is anticipated in the Delta Plan's six Priority Habitat Restoration Areas. The 2025 Blueprint Development Pattern includes all development outside of the transportation improvements that are anticipated to support the SCS or the plans, programs, projects, or activities encompassed within it. Additional, indirect land conversion is not anticipated.



Source: Prepared by SACOG in 2025.

Figure 3.10-4 2025 Blueprint Community Types in the Delta

Transportation Network Improvements and Programs

The 2050 transportation network is described in Chapter 2, "Project Description." As described therein, the focus of the transportation investments in the 2025 Blueprint is on the upkeep and maintenance of the existing road network. New and expanded roadways are not proposed in the Delta. Improving the functionality of the major transportation corridors outside of the Delta (e.g. I-5) may further support consistency with the Delta Plan and LURMP because the projects would route through traffic away from the Delta and ease congestion on existing roadways used for agricultural and recreational access.

Summary

As described above, the 2025 Blueprint identifies growth geographies in the Delta Secondary Zone that are consistent with adopted land use plans and does not include transportation projects that would promote further urbanization of the Delta. Evaluation of the 2025 Blueprint's potential to convert agricultural land, effect recreational uses, and conflict with planned trails throughout the SACOG region is provided in Section 3.2, "Agriculture and Forestry Resources," Section 3.15, "Recreation," and Section 3.16, "Transportation." Effects on water quality, which have the potential to impair beneficial uses (i.e., agriculture, municipal, industrial, water-contact recreation, and fish and wildlife habitat uses) of waterways, are evaluated in Section 3.9, "Hydrology and Water Quality." The 2025 Blueprint is consistent with the goals of the LURMP and policies of the Delta Plan. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

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3.11 MINERAL RESOURCES

This section describes the existing conditions (environmental and regulatory) and evaluates the potential mineral resource impacts of the 2025 Blueprint. Section 3.5, "Cultural Resources" and Section 3.17, "Tribal Cultural Resources," evaluate potential impacts to cultural and tribal cultural resources in the plan area. Section 3.6, "Geology, Soils, and Paleontological Resources," evaluates potential impacts associated with geological features and the potential for paleontological in the plan area.

SACOG did not receive comments related to mineral resources in response to the notice of preparation.

3.11.1 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws related to mineral resources are applicable to the 2025 Blueprint.

STATE

Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act (SMARA) (PRC Sections 2710–2796) 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 will encourage the production and conservation of mineral resources, while ensuring that adverse environmental effects of mining are prevented or minimized; mined lands are reclaimed and residual hazards to public health and safety are eliminated; and consideration is given to recreation, watershed, wildlife, aesthetic, and other related values. SMARA includes noticing requirements when permitting a use that would preclude future extraction of identified mineral resources, defined as: 1) the potential to extract minerals in Mineral Resource Zone (MRZ)-2 lands or 2) the potential to extract minerals in land designated in a lead agency's general plan as having important mineral resources to be protected.

LOCAL

General Plans

The Conservation Elements of the various city and county general plans of the plan area contain goals, objectives, and policies aimed at preserving and protecting valuable mineral deposits within their respective political boundaries as required by California Government Code Section 65302. Jurisdictions also address the preservation of mineral resources through land use regulation, and the use of land use overlays to denote areas with shared land use characteristics (e.g., mineral resource and natural resource overlays). Proponents of specific projects in the plan area would be required to consult the applicable general plans and ensure that the projects are consistent with the applicable guidelines of the jurisdictions in which the projects are located.

3.11.2 Environmental Setting

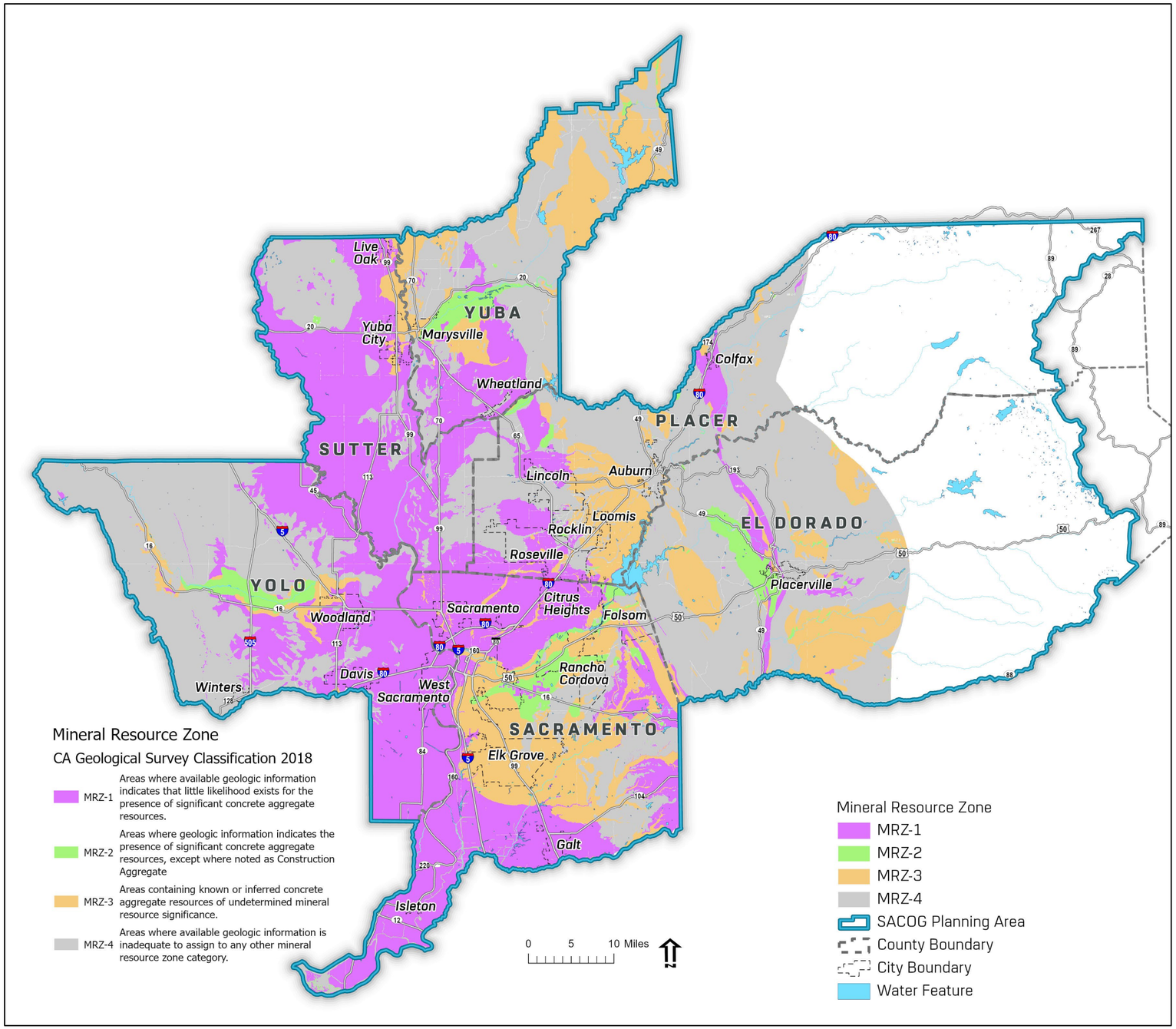
The California Department of Conservation Division of Mines and Geology has developed guidelines for the classification and designation of mineral lands, known as MRZs, and retains publications of the SMARA Mineral Land Classification Project dealing with mineral resources in California.

A number of mineral resources can be found within the region, including construction aggregate (sand, gravel, and crushed stone), clay, and gold. MRZ classifications are provided in accordance with SMARA (PRC Sections 2710–2796) described in further detail in Section 3.11.1 – Regulatory Setting.

MRZs are classified 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.

El Dorado County includes MRZ-2 locations directly north and south of the City of Placerville, extending to the county boundary, and south of Jenkinson Lake. Placer County includes MRZ-2 locations in the central portion of the county east of Colfax and west of French Meadows Reservoir. Sacramento County includes MRZ-2 locations in the north-central part of the county near the Jackson Corridor and in the northeastern part of the county north of the Eaton area. Sutter County includes a small MRZ-2 location at the southern edge of Yuba City. Yolo County includes MRZ-2 location in the central part of the county along Cache Creek, surrounding Highway 16, west of Interstate 5 and east of the Capay Valley. Yuba County includes MRZ-2 locations west of Highway 70 along the south side of Highway 20. MRZ locations within the plan area are depicted in Figure 3.11-1 below.



Source: Prepared by SACOG in 2025 based on data from the California Geological Survey.

Figure 3.11-1 Mineral Resources Zones in the Plan Area

3.11.3 Environmental Analysis

METHODOLOGY

The information presented in this chapter is based on a review of existing and available information and is regional in scope. Data, analysis, and findings provided in this section were considered and prepared at a programmatic level. This program-level analysis generally evaluates the potential for implementation of the 2025 Blueprint to directly or indirectly result in mineral resource impacts based on the projected land use pattern and planned transportation network relative to existing mineral resources. Impacts are evaluated qualitatively by considering the conditions of the plan area, the areas where growth and development are most likely to occur based on the projected land use pattern and planned transportation improvements in the 2025 Blueprint, and the existing regulations that would apply to the subsequent land use pattern and planned transportation improvements to analyze its mineral resources impacts.

The analysis assumes implementing agencies would ensure mineral resources are treated in accordance with applicable federal, state and local laws and regulations as part of project planning, design and engineering.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, the project could have a significant adverse effect related to mineral resources if it 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; and/or
- 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.

ISSUES NOT DISCUSSED FURTHER

All of the topics identified in the significance criteria above are addressed in the following analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.11-1: 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 or 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

Regional Growth and Land Use Change

Local jurisdictions have general plan policies to manage mineral resources and are required under SMARA to consider mineral resource recovery areas that have been designated MRZ-2 locations, indicating that significant mineral deposits are present or are likely to be present (see Figure 3.11-1). Implementation of the projected Development Pattern in the 2025 Blueprint would include new residential, commercial, and other land uses, as well as infill development. The 2025 Blueprint uses the adopted and proposed land use and transportation plans from the cities and counties of the SACOG region to help determine where housing and employment growth is likely to occur.

The projected land use pattern associated with implementation of the 2025 Blueprint could result in a reduction in availability of important designated mineral resources by making certain mineral resources inaccessible for future extraction, to the extent that any applicable general plan policy does not otherwise prevent or constrain development of an MRZ-2 area. Most MRZ-2 areas are located in predominately agricultural and open space areas where no development is planned or in Rural Residential communities where limited development is planned. However, some

MRZ-2 areas in the 2025 Blueprint, such as those in Sacramento County, are already developed or will be developed following mineral extraction. The 2025 Blueprint does not forecast any development in mineral resource zones by 2050, and instead emphasizes further development within already developed areas.

MRZ-3 areas, which contain mineral resources of unknown significance, are primarily mapped in Established Communities in the cities of Sacramento, Elk Grove, Folsom, and Woodland, and in Rural Residential Communities in El Dorado and Placer Counties. Where mineral resources could occur in Established Communities, the existing development would likely preclude the extraction of resources in the existing condition (due to incompatibility with existing land uses) and development that occurs following the 2025 Blueprint principals would not result in a substantial change in the availability of the mineral resource. Similarly, because limited growth is anticipated in Rural Residential Communities, the potential for development that results in the loss of availability of mineral resources is limited. Growth and land use change in and near the Developing Communities adjacent to Established Communities in Yuba City and Marysville could result in limited impairment of MRZ-3 resources in these areas. However, because of the minor extent of these potential effects relative to the plan area and because the significance of the resources has not been established, the effect of this growth would not be substantial at the plan level.

By developing more compactly, the 2025 Blueprint directs more growth to the areas that are already urbanized and prevents undeveloped land from being converted to urban uses. Keeping growth contained to areas that are already developed limits the amount of growth that takes place at the urban edge, adjacent to areas containing mineral resources. Mining of mineral resources in or near urban development may create land use incompatibilities and may be economically infeasible. Compact growth and urban infill allow for the preservation of non-urban areas where mineral resources may be more feasible to remove.

Although some housing and employment growth, consistent with historical trends, may occur in undeveloped areas within the plan area, the Development Pattern in the 2025 Blueprint does not forecast Blueprint-consistent development in these areas by 2050. Because the 2025 Blueprint does not include project development in this area, implementation of the 2025 Blueprint would not result in the loss of availability of a designated mineral resource that would be of value to the region and the residents of the state or result in the loss of availability of a locally important mineral resource recovery site.

Furthermore, the Development Pattern in the 2025 Blueprint was generally designed to be consistent with local planning documents. As previously discussed, local planning documents are required by SMARA to include policies that protect and conserve mineral resource zones designated by the state. Compliance with local policies and regulations pertaining to the preservation of mineral resources in conjunction to compliance with SMARA noticing requirements and coordination with the State Geologist and State Mining and Geology Board would further minimize impacts to locally important mineral resource sites.

Transportation Network Improvements and Programs

Transportation improvements from implementation of the 2025 Blueprint would serve urban uses in urbanized areas of the region. The planned transportation improvements are developed to most efficiently meet the demands created by the forecasted growth in population and jobs and focus mainly on the existing regional transportation system. Planned transportation improvements would largely be constructed within existing urban areas, or within existing rights-of-way and without the acquisition of land.

Transportation improvements associated with undeveloped areas of the 2025 Blueprint would include planned transportation improvements such as road maintenance, safety enhancements, other roadway operational improvements, and targeted capacity and multimodal improvements to existing facilities that accommodate increased travel options between urban areas. Expansion or extension of the roadway network from implementing 2025 Blueprint planned transportation improvements in undeveloped areas would require the need for additional land.

All transportation improvements are subject to SMARA requirements, and locally important resources are regulated by local jurisdictions through policies incorporated into general plans, specific plans, and other land use plans. Compliance with local policies and regulations pertaining to mineral resources and SMARA noticing requirements for mineral resource sites would minimize impacts to locally important mineral resource sites by requiring projects that

have the potential to impact designated mineral resource sites to inform the State Geologist and State Mining and Geology Board and coordinate to reduce impacts to the greatest extent feasible. These notice and coordination efforts would be subject to CEQA and would be required to be addressed in the project's environmental document.

The potential loss of availability of a designated mineral resource is a consideration in the final design of individual land use projects and transportation improvements and may be addressed in the project-level environmental review and mitigation process. Specific projects would be designed to be consistent with local planning documents, which are required to include policies that designate, preserve, and protect mineral resource zones mapped by the state. Further, most development would be located in developed areas where extraction of mineral resources is unlikely.

Impacts associated with implementation of the 2025 Blueprint would be the same across the plan area. The planned transportation improvements may result in the loss of availability of a designated mineral resource that would be of value to the region and the residents of the state. However, specific projects would be designed to be consistent with local planning documents, which are required to include policies that aim to preserve mineral resource zones mapped by the State and minimize impacts to the greatest extent feasible. Therefore, the projected land use pattern and planned transportation improvements are not likely to result in the loss of availability of a known mineral resource that would be of value to the region and the state or a locally important mineral resource recovery site.

Summary

As described above, most development would occur in developed areas where the potential for mineral resource extraction is unlikely, and new development projects would be required to comply with local planning documents which require the consideration of mineral resource zones. Therefore, the potential for loss of availability of a designated mineral resource of value to the region the state, or the loss of availability of a locally important mineral resource recovery site related to the Development Pattern and planned transportation improvements from implementation of the 2025 Blueprint at the regional level would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

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3.12 NOISE AND VIBRATION

This section includes a summary of applicable regulations related to noise and vibration, a description of existing ambient-noise conditions, and an analysis of potential short-term construction and long-term operational-source noise impacts associated with implementation of the 2025 Blueprint. Mitigation measures are recommended as necessary to reduce significant noise and vibration impacts. Additional data is provided in Appendix D, "Noise Modeling Calculations." Noise impacts on people residing or working within an airport land use plan or within 2 miles of a public or public use airport are addressed in Section 3.8, "Hazards and Hazardous Materials," of this EIR.

Noise in the daily environment fluctuates over time. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors used throughout this section.

- **Equivalent Continuous Sound Level (L_{eq}):** L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound level that occurs during the same period (Caltrans 2013: 2-48). For instance, the 1-hour equivalent sound level, also referred to as the hourly L_{eq}, is the energy average of sound levels occurring during a 1-hour period and is the basis for noise abatement criteria used by California Department of Transportation (Caltrans) and Federal Transit Administration (FTA) (Caltrans 2013: 2-47; FTA 2018).
- **Maximum Sound Level (L_{max}):** L_{max} is the highest instantaneous sound level measured during a specified period (Caltrans 2013: 2-48; FTA 2018).
- **Day-Night Level (L_{dn}):** L_{dn} is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-decibel (dB) "penalty" applied to sound levels occurring during nighttime hours between 10:00 p.m. and 7:00 a.m. (Caltrans 2013: 2-48; FTA 2018).
- **Community Noise Equivalent Level (CNEL):** CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to sound levels occurring during the nighttime hours between 10:00 p.m. and 7:00 a.m. and a 5-dB penalty applied to the sound levels occurring during evening hours between 7:00 p.m. and 10:00 p.m. (Caltrans 2013: 2-48).
- **Vibration Decibels (VdB):** VdB is the vibration velocity level in the decibel scale (FTA 2018).
- **Peak Particle Velocity (PPV):** PPV is the peak signal value of an oscillating vibration waveform. Usually expressed in inches per second (in/sec) (FTA 2018).

In response to the notice of preparation (NOP), SACOG received one comment related to noise and vibration. During the scoping meeting on February 26, 2025, noise from leaf blowers was cited as a concern. This comment has been carefully reviewed and considered by SACOG and is reflected in the analysis of impacts in this chapter. Specifically, impacts related to stationary noise are discussed in Impact 3.12-2 of this Draft EIR. Appendix A includes all comments received in response to the NOP.

3.12.1 Regulatory Setting

FEDERAL

US Environmental Protection Agency Office of Noise Abatement and Control

The US Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at more local levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to state and local governments. However, documents and research completed by the EPA Office of Noise Abatement and Control continue to provide value in the analysis of noise effects.

Federal Transit Administration

To address the human response to ground vibration, FTA has set forth guidelines for maximum-acceptable vibration criteria for different types of land use. These guidelines are presented in Table 3.12-1.

Table 3.12-1 Groundborne Vibration (GBV) Impact Criteria for General Assessment

Land Use Category	GVB Impact Levels (VdB re 1 micro-inch/second) Frequent Events[1]	GVB Impact Levels (VdB re 1 micro-inch/second) Occasional Events[2]	GVB Impact Levels (VdB re 1 micro-inch/second) Infrequent Events[3]
Category 1: Buildings where vibration would interfere with interior operations.	65[4]	65[4]	65[4]
Category 2: Residences and buildings where people normally sleep.	72	75	80
Category 3: Institutional land uses with primarily daytime uses.	75	78	83

Notes: VdB (vibration decibels) to 1 micro-inch/second and based on the root mean square (RMS) velocity amplitude.

1 "Frequent Events" is defined as more than 70 vibration events of the same source per day.

2 "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

3 "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.

4 This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define acceptable vibration levels.

Source: FTA 2018.

In addition to vibration criteria, FTA has established construction noise criteria based on the land use type affected by noise and depending on whether construction noise would occur during the daytime or nighttime. The FTA criteria are as follows:

- Residential: 90 A-weighted decibels (dBA) L_{eq} (day) and 80 dBA L_{eq} (night), and
- Commercial/Industrial: 100 dBA L_{eq} (day and night) (FTA 2018).

STATE

California Building Code Sound Transmission Standards

Noise within habitable units that is attributable to external sources is regulated by the California Building Standards codified in California Code of Regulations, Title 24, Part 2, Section 1207. These standards are enforceable at the time of construction or during occupancy and apply to habitable units with common interior walls, partitions, and ceilings or those adjacent to public areas such as halls, corridors, stairways, and service areas. Under these standards, the interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metrics used to measure these levels can be L_{dn} or CNEL, consistent with the applicable local general plan. Under California Public Resources Code Section 25402.1(g), all cities and counties in the state are required to enforce the adopted California Building Code, including these standards for noise in interior environments.

California Department of Transportation

Transportation and Construction Vibration Guidance Manual

The Caltrans *Transportation and Construction Vibration Guidance Manual* has established damage criteria for different types of buildings. These guidelines are presented in Table 3.12-2.

Table 3.12-2 Construction Vibration Damage Criteria

Building/Structural Category	Maximum PPV (in/sec) Transient Sources	Maximum PPV (in/sec) 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	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Notes: PPV = peak particle velocity; in/sec = inches per second; Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: Caltrans 2020a: Table 19.

Traffic Noise Analysis Protocol

The Caltrans *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects* (Protocol) specifies the policies, procedures, and practices to be used by agencies that sponsor new construction or reconstruction projects. The Caltrans Protocol identifies that although the Caltrans definition of a substantial increase in noise (defined as a 12 dB increase between existing and design-year with-project conditions) has been used in the past, this threshold should not necessarily be used for all projects (Caltrans 2020b: 7-1).

California General Plan Guidelines

The State of California General Plan Guidelines 2017, published by the California Governor's Office of Land Use and Climate Innovation (formerly known as the California Governor's Office of Planning and Research), provides guidance for the compatibility of projects within areas of specific noise exposure. Acceptable and unacceptable community noise exposure limits for various land use categories have been determined to help guide new land use decisions in California communities. In many local jurisdictions, these guidelines are used to derive local noise standards and guidance. Citing EPA materials and the State Sound Transmissions Control Standards, the State's General Plan Guidelines recommend interior and exterior CNEL of 45 and 60 dB for residential units, respectively (OPR 2017: 378).

LOCAL

Each of the six counties and 22 cities in the plan area has a general plan noise element. Some jurisdictions also have noise ordinances. The noise element and local noise ordinances are the two primary documents that local jurisdictions use to set noise standards in their community.

General Plans

A noise element is a required component of each jurisdiction's general plan. The noise element provides information on the current and future noise levels associated with local noise sources such as highways and freeways, major streets and arterials, rail operations, aviation activities, and local industrial plants. The noise element also includes planning policies and implementation measures for limiting the exposure of people to noise. In addition, the noise element must analyze and quantify, to the extent practical, as determined by the legislative body, current, and projected noise levels for all of the following sources:

- highways and freeways;
- primary arterials and major local streets;
- passenger and freight on-line railroad operations and ground rapid transit systems;
- commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation;

- local industrial plants, including, but not limited to, railroad classification yards; and
- other ground stationary sources identified by local agencies as contributing to the community noise environment.

The noise elements of the cities and counties located within the plan area typically apply land-use compatibility criteria of 60 to 65 dB L_{dn} as being normally acceptable for new residential developments affected by transportation noise sources. The intent of these standards is to regulate the noise environment for outdoor activities. In addition, an interior noise level criterion of 45 dB L_{dn} is commonly applied to residential land uses. The intent of this standard is to provide a suitable environment for indoor communication and sleep.

Typical options for attenuation of excessive noise levels established in planning documents include the use of setbacks or buffer areas between the noise source and the proposed noise-sensitive land use, noise barriers, residential unit design, and improvements to building façade construction. Neither audibility of a new noise source nor an increase in noise levels within recognized acceptable limits is usually considered to be a significant noise impact, but these concerns should be addressed and considered in the planning and environmental review processes.

Where projects affected by, or including, non-transportation noise sources are proposed, the performance standards of the various city and county general plans typically define acceptable noise exposure. For noise generated by new non-transportation noise sources, or noise-sensitive projects affected by non-transportation noise sources, hourly performance standards contained in general plan noise elements are commonly, but not universally, used within the plan area. In cases where hourly performance standards are used, they vary numerically and in terms of the specific noise metric used to evaluate non-transportation noise sources.

Community Noise Control Ordinances

To abate noise and resolve noise-related conflict with existing land uses, many jurisdictions have adopted community noise control ordinances. Community noise-control ordinances are generally designed to control noise on a short-term basis (usually by means of hourly noise-level criteria), rather than on 24-hour or annual cumulative noise exposures.

Regulation of noise emitted from traffic on public roadways, railroad operations, or aircraft in flight occurs at the federal level. While vehicle noise regulations are established at the federal level, there are a number of these regulations that can be enforced by local authorities through state law requirements, including Sections 32130, 23130.5, 27150, 27151, and 38275 of the California Vehicle Code which allow for local control of on-road mobile sources of noise.

3.12.2 Environmental Setting

ACOUSTIC FUNDAMENTALS

Prior to discussing the noise setting for the 2025 Blueprint, background information about sound, noise, vibration, and common noise descriptors is needed to provide context and a better understanding of the technical terms referenced throughout this section.

Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a human ear. Noise is defined as loud, unexpected, annoying, or unwanted sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or hertz (Hz) (e.g., a frequency of 250

cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz, or thousands of hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this large range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of dB.

Addition of Decibels

Because decibels are logarithmic units, SPLs cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness at the same time, the resulting sound level at a given distance would be 3 dB higher than if only one of the sound sources was producing sound under the same conditions. For example, if one idling truck generates an SPL of 70 dB, two trucks idling simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level approximately 5 dB louder than one source.

A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz and perceive sounds within this range better than sounds of the same amplitude with frequencies outside of this range. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an "A-weighted" sound level (expressed in units of A-weighted decibels) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgment correlates well with the A-scale sound levels of those sounds. Thus, noise levels are typically reported in terms of A-weighted decibels. All sound levels discussed in this section are expressed in A-weighted decibels unless otherwise noted. Table 3.12-3 describes typical A-weighted noise levels for various noise sources.

Table 3.12-3 Typical A-Weighted Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 1,000 feet	— 100 —	
Gas lawn mower at 3 feet	— 90 —	
Diesel truck at 50 feet at 50 miles per hour	— 80 —	Food blender at 3 feet, Garbage disposal at 3 feet
Noisy urban area, daytime, Gas lawn mower at 100 feet	— 70 —	Vacuum cleaner at 10 feet, Normal speech at 3 feet
Commercial area, Heavy traffic at 300 feet	— 60 —	
Quiet urban daytime	— 50 —	Large business office, Dishwasher next room

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime	— 30 —	Library, Bedroom at night
Quiet rural nighttime	— 20 —	
	— 10 —	Broadcast/recording studio
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Notes: dBA = A-weighted decibels.

Source: Caltrans 2013: Table 2-5.

Human Response to Changes in Noise Levels

As described above, the doubling of sound energy results in a 3-dB increase in the sound level. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different from what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear can discern 1-dB changes in sound levels when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000–8,000 Hz) range. In general, the healthy human ear is most sensitive to sounds between 1,000 and 5,000 Hz and perceives both higher and lower frequency sounds of the same magnitude with less intensity (Caltrans 2013: 2-18). In typical noisy environments, changes in noise of 1–2 dB are generally not perceptible. However, it is widely accepted that people can begin to detect sound level increases of 3 dB in typical noisy environments. A doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound would generally be perceived as barely detectable. Further, a 5 dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness (Caltrans 2013: 2-10).

Vibration

Vibration is the periodic oscillation of a medium or object for a given reference point. Sources of vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, (e.g., operating factory machinery) or transient (e.g., explosions). Vibration levels can be depicted in terms of amplitude and frequency relative to displacement, velocity, or acceleration.

Vibration amplitudes are commonly expressed in PPV or RMS vibration velocity. PPV and RMS vibration velocity are normally described in inches per second or in millimeters per second. PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is typically used in the monitoring of transient and impact vibration and has been found to correlate well with the stresses experienced by buildings (FTA 2018: 110, Caltrans 2020a: 6).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to average vibration amplitude. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels, which serves to compress the range of numbers required to describe vibration (FTA 2018: 110, Caltrans 2020a: 7). This is based on a reference value of 1 micro inch per second.

Typical outdoor sources of perceptible ground vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground vibration from traffic is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur to fragile buildings. Ground vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels (FTA 2018: 120, Caltrans 2020a: 27).

Vibrations generated by construction activity can be transient, random, or continuous. Construction activities can generate sufficient ground vibrations to pose a risk to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants (FTA 2018: 113). Transient construction vibrations are generated by blasting, impact pile driving, and wrecking balls. Continuous vibrations are generated by vibratory pile drivers, large pumps, and compressors. Random vibration can result from jackhammers, pavement breakers, and heavy construction equipment. Table 3.12-4 summarizes the general human response to different ground vibration-velocity levels.

Table 3.12-4 Human Response to Different Levels of Ground Noise and Vibration

Vibration-Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

Notes: VdB = vibration decibels referenced to 1 µ inch/second and based on the root mean square (RMS) velocity amplitude.

Source: FTA 2018: 120.

Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. How a noise level decreases with distance depends on the following factors:

Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Roads and highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources, thus propagating at a slower rate in comparison to a point source. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source.

Ground Absorption

The propagation path of noise from a source to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling provides additional attenuation associated with geometric spreading. Traditionally, this additional attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustic hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an additional ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the attenuation rate associated with cylindrical spreading, the additional ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance. This would apply to point sources, resulting in an overall drop-off rate of up to 7.5 dB per doubling of distance.

Atmospheric Effects

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels, as the wind can carry sound. Sound levels can be increased over large distances (e.g., more than 500 feet) from the source because of atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also affect sound attenuation.

Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver attenuates noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB of noise reduction (Caltrans 2013: 2-41, FTA 2018: 15, 16). Barriers higher than the line of sight provide increased noise reduction (FTA 2018: 16). Vegetation between the source and receiver is rarely effective in reducing noise because it does not create a solid barrier unless there are multiple rows of vegetation (FTA 2018: 15, 104, 106).

EXISTING NOISE ENVIRONMENT

Existing Noise- and Vibration-Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. The health effects of excessive noise in the community arise from interference with activities such as sleep, speech, recreation, and tasks demanding concentration or coordination. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels, and because of the potential for nighttime noise to result in sleep disruption. Land uses such as schools, transient lodging, historic sites, cemeteries, and places of worship are also generally considered sensitive to increases in noise levels. These land use types are also considered vibration-sensitive land uses in addition to commercial and industrial buildings where vibration would interfere with operations within the building, including levels that may be well below those associated with human annoyance. However, commercial and industrial land uses are not considered noise sensitive. The plan area includes many of these types of noise- and vibration-sensitive land uses including residences, hotels/motels, places of worship, and schools.

Existing Noise Sources and Ambient Levels

The noise environment in the plan area comprises two major categories of noise sources: transportation and non-transportation. Transportation noise sources include surface traffic on public roadways, railroad line operations, and aircrafts in flight. Non-transportation (or fixed) noise sources commonly include commercial, industrial, and active outdoor recreation activities, mechanical equipment (i.e., lawnmowers, leaf blowers, heating, ventilation, and air conditioning [HVAC] equipment), and other non-transportation noise sources not included in the traffic, railroad, and aircraft category.

Traffic Noise

The ambient noise environment in the plan area is defined by a wide variety of noise sources; however, the most pervasive source of noise is the traffic associated with the use of thousands of miles of roadways throughout the region. Traffic noise exposure is mainly a function of the number of vehicles on a given roadway per day, the speed of those vehicles, the percentage of medium and heavy trucks in the traffic volume, and the receiver's proximity to the roadway. Every vehicle passage on every roadway in the region radiates noise.

The existing traffic noise environment in the plan area has been estimated by using traffic noise modeling in a manner consistent with the Federal Highway Administration (FHWA) Traffic Noise Model. To calculate existing traffic noise in the plan area, noise levels were modeled for 1,130 roadway locations throughout the plan area using daily traffic volumes at a fixed distance of 100 feet from each roadway. The results indicate that the existing (2019) ambient traffic noise levels in the plan area vary between 43.6 dBA and 85.8 dBA CNEL depending on the location and traffic volume (see Appendix D for traffic noise modeling).

Rail Noise

Freight and passenger railroad operations and light-rail train operations contribute to the overall ambient noise environment in the plan area. Rail tracks are dispersed throughout the region, and operational schedules vary, though operations can generate considerable noise levels in the immediate vicinity of the tracks during train passages.

Industry and Other Non-Transportation Noise

A wide variety of industrial and other non-transportation noise sources are located within the plan area including manufacturing operations, power plants, food packaging and processing facilities, aggregate mining and processing plants, and loading docks. Noise generated by these, and other similar noise sources, varies widely but in some cases can be a potentially significant contributor to the local ambient noise environment. Although non-transportation noise sources can define the ambient noise environment within a given distance to the noise source, the overall ambient noise environment is defined primarily by traffic. This is because traffic noise is pervasive throughout the plan area whereas noise generated by an individual industrial use only affects a localized area in the immediate vicinity of the noise source.

Non-transportation noise levels are difficult to quantify at the regional level, as noise levels can vary dramatically from location to location, even in the same community type. The types of land uses, the distance between noise sources, and the presence or absence of barriers can all greatly affect noise levels within a given area. Typically, ambient noise levels in a quiet residential area with light background traffic noise will range from 50 dB to 60 dB (Caltrans 2013). In busy more urban areas (e.g., central business districts and mixed-use areas), ambient noise levels in the range of 60 to 70 or more dB are not uncommon (Caltrans 2013). At locations near freeways, ambient noise levels can reach 75 dB or higher. Similarly, industrial activity also has a widely varying range of noise outputs, depending on the type of activity taking place and whether the activity is indoors or outdoors.

3.12.3 Environmental Analysis

METHODOLOGY

This analysis is program-level and evaluates potential noise and vibration impacts from the implementation of the 2025 Blueprint based on the projected land use pattern and planned transportation improvements relative to the existing ambient noise conditions within the plan area. The method of programmatic analysis of specific noise and vibration impacts is described below. Because this analysis is programmatic and focuses on impacts of the 2025 Blueprint on a regional basis, it does not account for site-specific conditions such as noise barriers, precise site conditions, and detailed traffic conditions. It is expected that project-specific noise and/or acoustical analyses would be required, as applicable, as part of the environmental review prior to project approval by the appropriate lead agency.

Construction Noise

Construction noise can be characterized based on the type of activity and associated equipment needed. Due to the programmatic nature of this analysis, construction timelines, required activities, and construction equipment lists are not currently available. Although precise construction noise impacts cannot be determined without specific project and property information, the analysis does assess the potential for construction noise impacts under scenarios likely to represent actual conditions. To evaluate potential construction noise impacts, reference noise levels associated with two of the loudest pieces of common construction equipment (i.e., an impact pile driver and a crane) were used to model construction noise levels associated with the types of projects anticipated to be developed under the 2025 Blueprint (e.g., roadway improvements, land use development). Many local jurisdictions exempt construction activity from jurisdictional noise standards. For example, Section 6.68.090 of the Sacramento County code exempts construction noise sources from maximum noise level requirements and does not establish construction-specific noise thresholds. Therefore, in this analysis, the FTA recommended daytime (i.e., 90 dBA L_{eq}) and nighttime (80 dBA L_{eq}) construction noise thresholds for sensitive uses are used to evaluate the effects of construction noise (FTA 2018). In addition, although construction noise is short-term, it can nonetheless result in substantial increases in ambient noise levels in the immediate vicinity of the construction site. In this analysis, a substantial increase in ambient noise from construction activities is defined as an increase in 5 dBA or more above ambient levels, as this is generally perceived as a distinctly noticeable noise increase (Caltrans 2013: 2-10). However, projects associated with the 2025 Blueprint would be subject to the requirements of applicable agencies (e.g., local).

Reference noise levels for specific equipment or activity types are well documented and the usage thereof common practice in the field of acoustics. Construction source noise levels were determined based on methodologies, reference emission levels, and usage factors from the FTA *Guide on Transit Noise and Vibration Impact Assessment* methodology (FTA 2018) and FHWA *Roadway Construction Noise Model User's Guide* (FHWA 2006).

Operational Stationary Noise

Due to the programmatic nature of this analysis and the localized nature stationary noise sources, operational stationary noise associated with development cannot be accurately modeled. Therefore, this analysis identifies potential stationary noise sources and reference noise emission levels for activities and equipment associated with future development (e.g., building HVAC equipment, transit facility noise) and assesses potential noise impacts qualitatively.

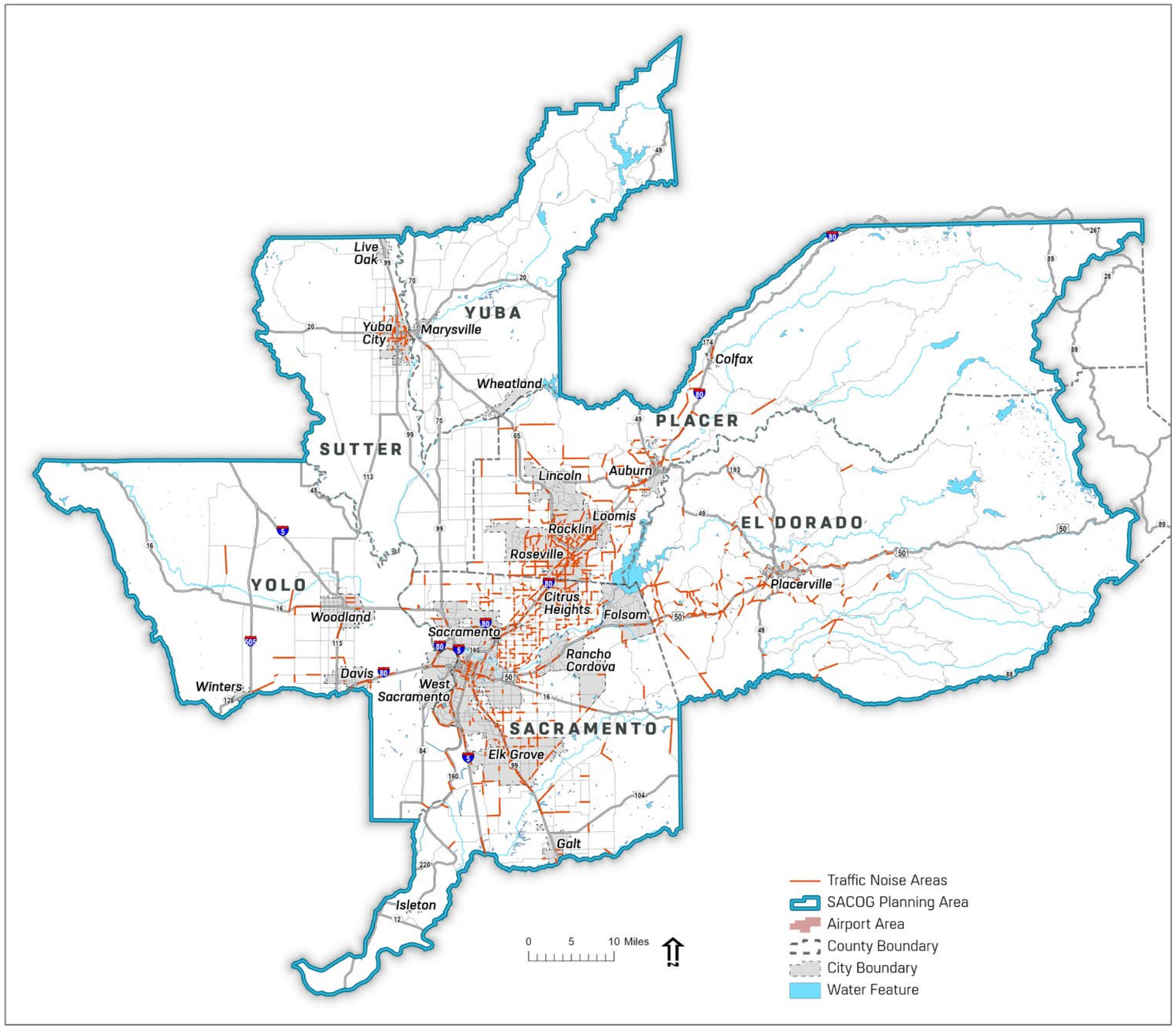
Operational Traffic Noise

Changes in land use and the implementation of proposed transportation strategies (e.g., roadway widenings, high-occupancy-vehicle [HOV] lanes, implementation of bus rapid transit lanes), would affect the distribution of vehicle travel throughout the region. To assess potential long-term (operation-related) changes in traffic noise at the regional scale, this analysis uses traffic volume data provided by SACOG to model roadway noise contours using calculation methods consistent with the FHWA Traffic Noise Model (FHWA 2004). The 1,130 roadway segments do not include each individual roadway noise source in the region; rather, they constitute a representative sample of typical roadway noise sources seen throughout the plan area. Locations where traffic noise was modeled are displayed in Figure 3.12-1. The analysis is based on the reference noise emission levels for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and ground attenuation factors.

The transportation noise analysis evaluates the impacts of the 2025 Blueprint by comparing predicted traffic noise levels under the 2025 Blueprint (i.e., 2050 conditions) to the baseline existing conditions. As detailed in the introductory text of Chapter 3, "Environmental Impacts and Mitigation Measures," 2019 data are employed to approximate the existing conditions. The use of more recent data gathered during the COVID-19 pandemic would be less accurate, as it would underrepresent the extent of roadway traffic.

For the purposes of these comparisons, all values are calculated at a fixed distance of 100 feet from each roadway centerline. The evaluation does not consider whether there are sensitive receptors located adjacent to the freeways and arterials but evaluates all roadways equally, as if they were located adjacent to sensitive receptors. The modeling of existing traffic noise levels does not account for existing sound barriers (e.g., sound walls and berms) and does not attempt to quantify the dB of attenuation provided by sound walls. By assuming no attenuation for existing soundwalls, other structures, intervening topography, or vegetation, the baseline values identified in the impact evaluation below are conservative where such features exist. The analysis reports the potential for noise impacts associated with absolute noise levels as well as substantial increase in noise.

To analyze the transportation noise effects of implementation of the 2025 Blueprint, SACOG developed noise thresholds for each Community Type (see Table 3.12-5). Because noise impacts are experienced at the localized level, one regional noise threshold cannot reflect the varied noise environments found in the plan area of the 2025 Blueprint. The absolute noise level thresholds were developed based on a review of the California General Plan Guidelines and local jurisdiction general plan thresholds. SACOG used the high end of the California General Plan Guidelines for Center and Corridor Communities and Established Communities (as these are typically areas with higher levels of existing development), the middle of the range for Developing Communities (as these are typically at the edge of existing urban or suburban development), and the low end of the range for Rural Residential Communities (as these are predominantly in rural, less populated areas with lower levels of existing development). Agricultural and Natural Lands in the 2025 Blueprint are not expected to develop during the planning period and are not necessarily noise-sensitive or noise-generating; thus, a "neutral" noise standard was applied to this community type. The noise increase thresholds are based on the concept that people already exposed to higher noise levels (e.g., 75 dBA CNEL) should be expected to tolerate a smaller increase in noise; whereas, if existing noise levels are low (e.g., 60 dBA CNEL), a greater increase in noise would be more tolerable (FTA 2018: 30). The thresholds established in Table 3.12-5 are comparable to thresholds applied by other jurisdictions in the region.



Source: Prepared by SACOG in 2025 based on modeling conducted by Ascent in 2025.

Figure 3.12-1 Traffic Noise Locations Modeled in the Plan Area

Table 3.12-5 Transportation Noise Thresholds by Community Type

Geography	Noise Threshold (dB CNEL)	Noise Increase Threshold (dB CNEL)
Center and Corridor Communities	75	1.5
Established Communities	65	3.0
Developing Communities	60	3.0
Rural Residential Communities	55	3.0
Agricultural and Natural Lands	60	3.0

Notes: dB = decibel; CNEL = community noise equivalent level.

Source: Data compiled and provided by SACOG in 2019.

This analysis conservatively does not account for any natural or human-made shielding (e.g., noise barriers or noise-reducing pavement) and thus, modeled noise levels may be overestimated where such shielding exists.

Roadway segments that do not exceed CNEL thresholds under existing conditions but would exceed them with implementation of the 2025 Blueprint under 2050 conditions are identified as resulting in a potentially significant traffic noise impact. Roadway segments that would result in a substantial increase in noise (as defined in Table 3.12-5) are also considered to result in potentially significant traffic noise impacts.

Construction Vibration

Construction activities could potentially expose nearby structures and people to ground vibration levels that result in structural damage or negative human response. Due to the programmatic nature of this analysis, a detailed construction equipment list is not available. Although precise construction vibration impacts cannot be determined without specific project and property information, the analysis does assess the potential for construction noise vibration under scenarios likely to represent actual conditions.

Construction activities that could expose people to excessive vibration, resulting in sleep disturbance or prolonged disruption to daily activities/work, are more likely to occur during construction activities that involve impact equipment (e.g., pile drivers, blasting). Blasting equipment is typically required to remove rock, and pile drivers are typically required for building larger structures, such as bridges and multi-story buildings. Projects proposed under the 2025 Blueprint include roadway widenings and bridge replacements. Therefore, it can be assumed that this type of equipment would be used for some construction activities associated with the 2025 Blueprint. More typical construction activities associated with development under the 2025 Blueprint would include less vibration intensive equipment such as bulldozers and graders. For a conservative analysis, to evaluate the effects of construction vibration, the FTA threshold of 72 VdB for human annoyance to frequent events (Table 3.12-1) and the Caltrans threshold of 0.25 in/sec PPV for structural damage to historic and some old buildings (Table 3.12-2) from continuous/frequent intermittent sources is used. Construction vibration levels and contour distances were determined based on methodologies, reference emission levels, and usage factors in the FTA Guide on Transit Noise and Vibration Impact Assessment (FTA 2018). Reference levels for vibration emissions for specific equipment types are well documented, and the usage thereof is common practice in the field of acoustics.

Operational Vibration

FTA guidance was used to evaluate vibration levels from transportation-related vibration. Specifically, the FTA threshold of 72 VdB for human annoyance to frequent events (Table 3.12-1) was used. Generally, available data (e.g., the increase in the number of additional hourly train pass-by events) are insufficient to provide a detailed analysis; therefore, vibration impacts were assessed using the best available data from published sources and established reference vibration levels.

THRESHOLDS OF SIGNIFICANCE

For the purposes of this EIR, SACOG has determined that adoption and/or implementation of the 2025 Blueprint would result in significant impacts under CEQA if it would result in:

- temporary construction-related noise levels that exceed the FTA recommended exterior daytime noise levels of 90 dBA L_{eq} or nighttime noise levels of 80 dBA L_{eq} at sensitive land uses or result in a temporary increase of 5 dBA or more above existing ambient noise levels;
- traffic noise levels that exceed the Community Type thresholds identified in Table 3.12-5 or result in traffic noise increases of more than 1.5 dBA CNEL for Center and Corridor Communities or more than 3 dBA CNEL above existing conditions for other Community Types;
- permanent stationary noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; or
- groundborne vibration or groundborne noise levels that exceed the Caltrans recommended threshold of 0.25 in/sec PPV with respect to the structural damage or the FTA recommended threshold of 72 VdB for human annoyance to frequent events.

Issues Not Discussed Further

All of the topics identified in the significance criteria above are addressed in the following analysis. Noise impacts on people residing or working within an airport land use plan or within 2 miles of a public or public use airport are addressed in Section 3.8, "Hazards and Hazardous Materials" of this Draft EIR.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.12-1: Result in Temporary Noise Levels in the Vicinity of the Project that Exceed FTA Recommended Standards or Generate a Substantial Temporary Increase in Ambient Noise Levels

The projected land use pattern and planned transportation improvements within the plan area would result in construction activities that generate temporary noise. Short-term construction noise levels on and near a project site would fluctuate depending on the type, quantity, and duration of usage for the various types of heavy-duty equipment. Table 3.12-6 lists the noise levels associated with typical construction equipment.

Table 3.12-6 Typical Construction Equipment Noise Levels

Equipment	Maximum Noise Level at 50 feet, dB
Air Compressor	80
Backhoe	80
Ballast Equalizer	82
Ballast Tamper	83
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Derrick	88
Crane, Mobile	83
Crane	81
Dozer	85

Equipment	Maximum Noise Level at 50 feet, dB
Generator	82
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	80
Paver	85
Pile-driver (Impact)	101
Pile-driver (Sonic)	95
Pneumatic Tool	85
Pump	77
Rail Saw	90
Rock Drill	95
Roller	85
Saw	76
Scarifier	83
Scraper	85
Shovel	82
Spike Driver	77
Tie Cutter	84
Tie Handler	80
Tie Inserter	85
Truck	84

Notes: dB = decibel.

Source: FTA 2018: Table 7-1.

Regional Growth and Land Use Change

As detailed in Chapter 2, "Project Description," the 2025 Blueprint is designed to accommodate a projected regional growth of approximately 580,000 people, 263,000 jobs, and 278,00 homes by 2050, with a focus on development in existing communities while also assuming robust growth in Developing Communities. To accommodate the regional growth forecast, the 2025 Blueprint designates community types and applies a series of land use strategies to these select geographies to affect the location, use, intensity, and density of forecasted development.

Construction noise is an unavoidable result of planned growth in any given location. Construction impacts are considered temporary and localized in nature, as they are limited to the time during which the project is being constructed and confined to areas adjacent to the construction site. After the project is completed, all construction equipment and vehicles are removed. As detailed in Section 2.12.3, "Environmental Setting," above, noise levels, including construction-related noise, dissipate rapidly from the source. Thus, sensitive land uses closest to activities are of greatest concern when evaluating construction noise.

Implementation of the 2025 Blueprint land use growth pattern would result in the construction of new developments that could result in temporary noise impacts from grading, paving, clearing, landscaping, staging, excavation, earthmoving, and other related construction activities. Such construction activity could require the use of heavy-duty construction equipment (e.g., bulldozers, backhoes) that generate noise in the immediate vicinity of the source, often resulting in noise levels substantially higher than existing conditions. Table 3.12-6 summarizes typical construction noise levels for various pieces of construction equipment; however, noise effects from construction activities depend

on several factors, including the types of surrounding land uses, duration and type of construction activities, distance between source and receptor, existing ambient noise levels, and the presence or absence of barriers between source and receptor.

Due to the regional scale of the 2025 Blueprint and the programmatic level of this analysis, specific construction-related details (e.g., location, schedule, equipment type/number) for individual land use development projects are not available. As shown in Table 3.12-6, noise levels associated with individual pieces of construction equipment could range between 76 dBA L_{max} and 101 dBA L_{max}. Construction activities typically involve the simultaneous operation of several pieces of equipment on a project site. Therefore, a representative construction scenario, including two of the loudest pieces of construction equipment (i.e., an impact pile driver, crane), was assumed. As shown in Table 3.12-6 an impact pile driver generates noise levels of approximately 101 dBA L_{max} at 50 feet and a crane generates approximately 81 dBA L_{max} at 50 feet. Accounting for typical equipment usage factors and the simultaneous operation of these two pieces of equipment, noise levels of approximately 94.0 dBA L_{eq} and 101 dBA L_{max} at 50 feet could occur (see Appendix D for detailed modeling inputs). Construction noise could exceed the FTA recommended daytime (i.e., 90 dBA L_{eq}) nighttime (i.e., 80 dBA L_{eq}) noise standards for residential receptors within approximately 80 feet (daytime) and 252 feet (nighttime) of construction activity (see Appendix D for detailed modeling inputs). Therefore, the land use development has the potential to result in construction-related impacts that exceed FTA recommended residential daytime and nighttime exterior noise thresholds. In addition, although construction noise is short-term, it can nonetheless result in substantial increases (e.g., 5+ dBA increase) in ambient noise levels in the immediate vicinity of the construction site. As detailed above in "Methodology," an increase of 5 dBA or more above ambient levels is generally perceived as a distinctly noticeable noise increase (Caltrans 2013: 2-10) and, thus, is applied as the substantial increase threshold in this analysis.

Transportation Network Improvements and Programs

Construction-related noise impacts of transportation projects, like those associated with land development, would depend on the extent of construction being undertaken, proximity to existing sensitive land uses, and applicable noise standards. Construction of transportation network improvements proposed under the 2025 Blueprint could result in increased noise levels for the same reasons described above. In addition, transportation network projects (e.g., roadway expansion, bicycle and pedestrian facility construction) typically progress in a linear fashion (i.e., along the road right-of-way), and nighttime construction is sometimes required to minimize traffic congestion during peak travel periods. Thus, construction activities could affect individual receptors for shorter periods of time as elevated noise levels would only occur temporarily in the location where the construction occurs before moving along the roadway right-of-way. However, such activity could result in greater disturbance to nearby receptors if construction were to occur during nighttime hours when residents are generally more susceptible to noise disturbance.

Construction activity could require the use of heavy-duty construction equipment such as bulldozers and backhoes. In addition, some transportation network improvements (e.g., roadway expansion, bridge replacement) could require the use of a pile driver, which is typically required for building large structures such as bridges. However, due to the regional scale of the 2025 Blueprint, specific construction-related details (e.g., location, schedule, equipment type/number) for individual transportation network improvements are not available. Based on reference noise levels for two types of equipment that could be used simultaneously during construction of transportation network improvements (i.e., an impact pile driver and crane) and accounting for typical usage factors, construction noise could reach levels of 94 dBA L_{eq} and 101 dB L_{max} at 50 feet from the construction site (see Appendix D for detailed modeling). Therefore, depending on proximity to sensitive receptors, duration of construction activities, and hours of construction, construction noise levels could exceed FTA recommended exterior residential daytime and nighttime construction noise standards of 90 dBA L_{eq} and 80 dBA L_{eq}, respectively, as well as local construction-related noise standards and thresholds. Furthermore, depending on the existing ambient noise levels, duration and timing of construction activities, construction could result in a substantial (e.g., 5+ dBA) increase in noise.

Summary

Construction of land development and transportation network projects proposed by the 2025 Blueprint has the potential to result in noise levels that exceed FTA standards and generate substantial increases in noise such that nearby sensitive receptors could be adversely affected. For these reasons, this impact would be **significant**.

Mitigation Measures

SACOG does not have the authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measure or other comparable measure identified by the lead agency at the project level would reduce the impacts from noise, and agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081).

Mitigation Measure 3.12-1: Employ Measures to Reduce Construction Noise

To reduce construction noise levels, implementing agencies shall implement measures, where applicable and necessary based on project- and site-specific considerations, that include those (or equally effective measures) identified below:

- Notify residents and occupants within 252 feet of the project construction area at least 30 days in advance of anticipated times when construction noise levels are anticipated to exceed evening or nighttime noise limits established in the noise element of the general plan or noise ordinance.
- Designate an on-site construction compliance and enforcement manager for the project.
- Post procedures and phone numbers at the construction site for notifying the implementing agency staff and construction contractor (during regular construction hours and off-hours), along with permitted construction days and hours, complaint procedures, and who to notify in the event of a problem.
- All stationary construction equipment (e.g., generators, compressors, cement mixers) and staging areas shall be located as far as possible from nearby noise-sensitive land uses, and/or located to the extent feasible such that an existing or constructed noise attenuating feature (e.g., temporary noise wall or blanket) block the line-of-site between affected noise-sensitive land uses and construction staging areas.
- Prohibit the idling of construction equipment for extended periods of time in the vicinity of sensitive receptors.
- All construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer recommendations. Equipment engine shrouds shall be closed during equipment operation.
- For construction activity that would occur within a clear line-of-sight of an adjacent offsite sensitive receptor (as defined by the local jurisdiction), take place outside of hours during which construction activity is exempt from local noise standards, and exceed applicable construction noise standards or thresholds, the construction contractor shall install temporary sound barriers to attenuate noise, such as temporary noise curtains, sound walls, or similar products that provide a barrier to construction noise. The temporary sound barrier shall be located between the project construction noise sources and receptors to shield the receptors from construction noise. When installed properly, acoustic barriers can reduce construction noise levels by approximately 8-10 dB (EPA 1971). The installation of any temporary shall meet all the following criteria:
    - be installed as close as feasible to the boundary of the construction site within the direct line of sight path of the nearby sensitive receptor(s);
    - consist of durable, flexible composite material featuring a noise barrier layer bound to sound-absorptive material on one side; and
    - consist of rugged, impervious material with a surface weight of at least one pound per square foot, such that a minimum of 10 dBA reduction is achieved on the receiving side of the sound barrier.

Mitigation Measure 3.12-2: Employ Measures to Reduce Construction Noise

To achieve compliance with the applicable construction noise standards of the relevant jurisdiction within the plan area, implementing agencies shall require the construction contractor(s) to comply with local construction-related noise standards and policies established in the most recent general plan or local ordinances, including restricting construction activities to permitted hours as defined under local jurisdiction regulations, unless otherwise necessary.

Significance after Mitigation

Implementation of Mitigation Measure 3.12-1 would provide reductions in daytime and nighttime construction noise levels by ensuring proper equipment use, locating equipment away from sensitive land uses, and requiring the use of enclosures. Implementation of these noise-reduction features would reduce construction noise levels by approximately 10 dBA or more (NCHRP 1999; EPA 1971). To the extent that a local agency requires an individual project to implement all feasible mitigation measures described above, construction noise levels could be reduced by 10 dB. Greater reductions may be achieved and the frequency and intensity of construction-related noise at nearby receptors may be further reduced, depending on actual construction activities and proximity to receptors. In addition, compliance with local construction noise standards would typically limit construction to less sensitive hours of the day and could further reduce the effects of construction noise. However, there could be instances where noise level reductions from implementation of mitigation and compliance with local standards and ordinances would not be sufficient to reduce noise to an acceptable level. For these reasons, construction-related noise associated with the 2025 Blueprint could exceed applicable thresholds and result in a substantial temporary increase in noise.

Projects taking advantage of CEQA Streamlining provisions of SB 375 (PRC Sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measure described above to address site-specific conditions, resulting in impacts that are less than significant. However, because SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the lead agency to determine and adopt project-specific mitigation, this impact would be **significant and unavoidable**.

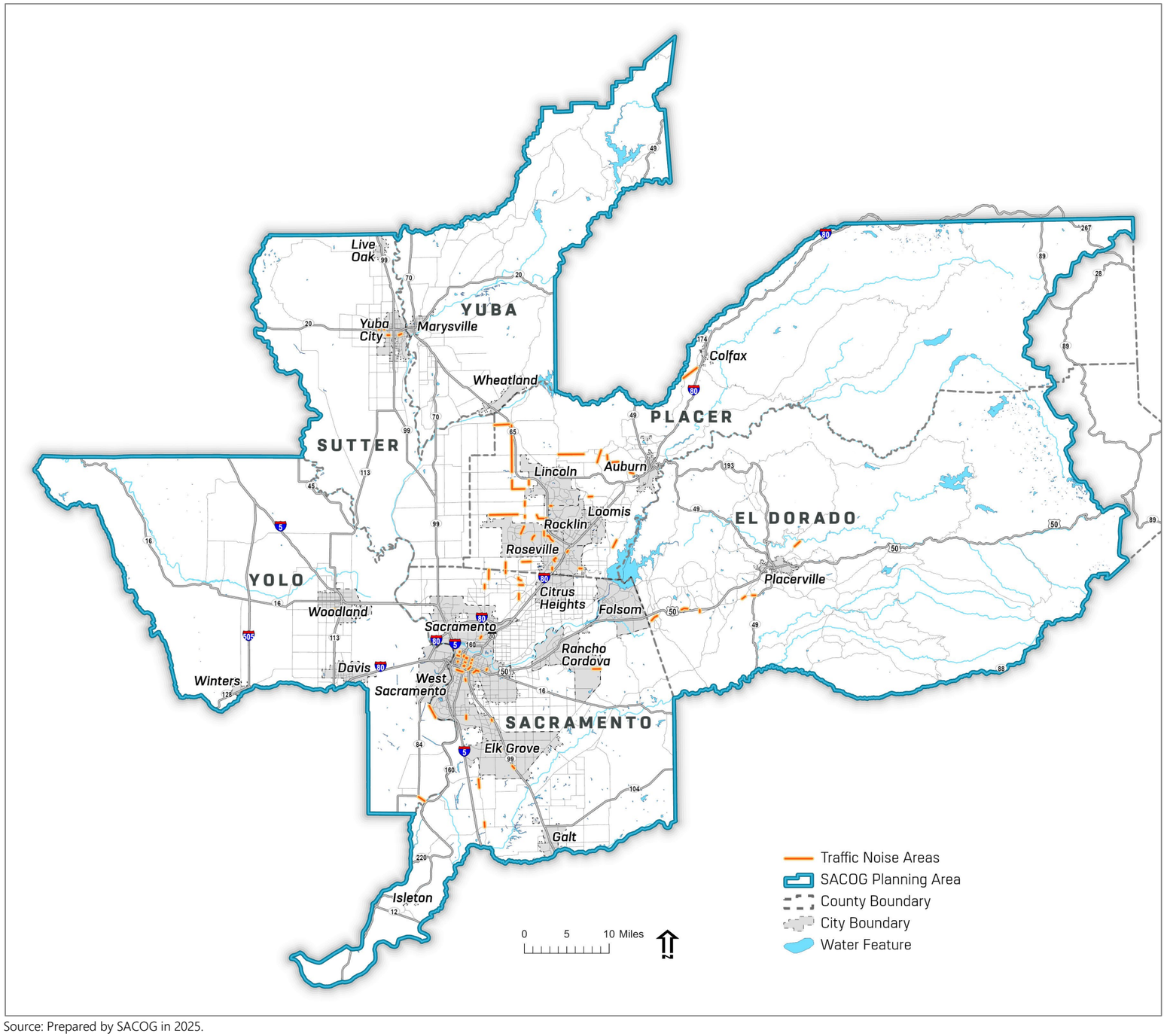
Impact 3.12-2: Result in Traffic Noise Levels that Exceed the Community Type Thresholds Identified in Table 3.12-5 or Permanent Stationary Noise Levels in the Vicinity of the Project in Excess of Standards Established in the Local General Plan or Noise Ordinance, or Applicable Standards of Other Agencies

Regional Growth and Land Use Change

The 2025 Blueprint promotes a compact growth pattern served by an efficient transportation system to facilitate a reduction in vehicle miles traveled within the region. Nevertheless, regional growth and new development would result in increased daily trips and, therefore, increased traffic noise. In addition, development would include new stationary noise sources (e.g., HVAC equipment, loading docks) which would also contribute to the noise environment. Noise exposure and effects would vary greatly depending on proximity of sensitive receptors to existing and new noise sources (e.g., transit corridors) and ambient noise levels. Transportation and stationary noise sources are discussed separately below.

Transportation Noise

Changes in land use due to forecasted development would generate new trips and these trips would be distributed on existing and expanded roadways. There would be increases in roadway volumes on some roadways in the region and decreases in others depending on the land use development relative to the local roadway system. Of the 1,130 transportation segments analyzed, 93 exceed the noise thresholds identified in Table 3.12-5 or are projected to experience a substantial increase in transportation-related noise according to the thresholds in Table 3.12-5. Table 3.12-7 identifies existing and existing-plus-plan average transportation noise levels by community type that would result in a substantial traffic noise increase and Figure 3.12-2 shows the locations of these segments. It is foreseeable that the noise levels projected on the identified roadway segments in Table 3.12-7 would be lower than those currently modeled if a noise barrier or other attenuation were present. However, this analysis takes a conservative approach and analyzes noise effects without barriers in place.



Source: Prepared by SACOG in 2025.

Figure 3.12-2 Locations of Potentially Significant Transportation Noise Impacts

Table 3.12-7 Locations of Potentially Significant Transportation Noise Impacts

Roadway Name	County	Existing (2019) Noise Levels (dBA CNEL)	Existing + Project (2050) Noise Levels (dBA CNEL)	Noise Level Threshold (dBA CNEL)	Modeled Change in Noise Levels (dBA)	Allowable Increase Threshold
Center and Corridor Communities						
White Rock Road	El Dorado	67.5	69.8	75	2.3	1.5
Judah Street	Placer	54.8	56.3	75	1.5	1.5
Oak Street	Placer	63.0	64.6	75	1.6	1.5
Vernon Street	Placer	61.8	63.8	75	2.0	1.5
Vernon Street	Placer	60.3	62.4	75	2.0	1.5
Vernon Street	Placer	61.3	63.2	75	1.9	1.5
15th Street	Sacramento	52.8	59.2	75	6.4	1.5
24th Street	Sacramento	44.1	46.5	75	2.4	1.5
29th Street	Sacramento	56.2	59.0	75	2.7	1.5
29th Street	Sacramento	55.0	57.2	75	2.2	1.5
29th Street	Sacramento	57.0	59.1	75	2.1	1.5
2nd Avenue	Sacramento	54.3	56.3	75	2.0	1.5
2nd Avenue	Sacramento	54.1	56.7	75	2.5	1.5
2nd Avenue	Sacramento	46.6	54.2	75	7.6	1.5
30th Street	Sacramento	57.8	60.2	75	2.3	1.5
58th Street	Sacramento	52.9	55.3	75	2.4	1.5
7th Street	Sacramento	58.2	62.8	75	4.6	1.5
9th Street	Sacramento	58.4	60.3	75	1.9	1.5
Big Horn Boulevard	Sacramento	65.9	67.5	75	1.6	1.5
G Street	Sacramento	51.8	57.1	75	5.3	1.5
H Street	Sacramento	53.7	58.0	75	4.3	1.5
H Street	Sacramento	53.5	58.6	75	5.1	1.5
H Street	Sacramento	52.4	55.2	75	2.8	1.5
N Street	Sacramento	55.5	60.1	75	4.6	1.5
S Street	Sacramento	57.3	58.9	75	1.6	1.5
T Street	Sacramento	55.8	59.8	75	4.1	1.5
T Street	Sacramento	55.6	57.6	75	2.0	1.5
Bridge Street	Sutter	67.7	69.5	75	1.8	1.5
Developing Communities						
Fiddyment Road	Placer	65.5	69.2	60	3.7	3.0
Fiddyment Road	Placer	60.2	64.6	60	4.4	3.0
Foothills Boulevard	Placer	62.6	70.7	60	8.1	3.0
Moore Road	Placer	53.2	58.0	60	4.8	3.0
Nelson Lane	Placer	57.0	61.2 [a]	60	4.2	3.0

Roadway Name	County	Existing (2019) Noise Levels (dBA CNEL)	Existing + Project (2050) Noise Levels (dBA CNEL)	Noise Level Threshold (dBA CNEL)	Modeled Change in Noise Levels (dBA)	Allowable Increase Threshold
South Dowd Road	Placer	50.5	56.8	60	6.3	3.0
Sunset Boulevard W:W	Placer	66.2	70.6	60	4.5	3.0
Sunset Boulevard W:W	Placer	61.4	66.6	60	5.2	3.0
Watt Avenue	Placer	61.6	68.3	60	6.7	3.0
16th Street	Sacramento	56.3	63.4 [a]	60	7.1	3.0
West Stockton Boulevard	Sacramento	65.4	69.2	60	3.9	3.0
Established Communities						
Cameron Park Drive	El Dorado	64.8	65.0 [a]	65	0.2	3.0
Country Club Drive	El Dorado	57.2	61.0	65	3.7	3.0
Country Club Drive	El Dorado	55.3	59.1	65	3.8	3.0
Mother Lode Drive	El Dorado	64.4	65.6 [a]	65	1.3	3.0
Pleasant Valley Road	El Dorado	64.3	65.3 [a]	65	1.0	3.0
White Rock Road	El Dorado	64.5	65.7 [a]	65	1.2	3.0
Auburn Folsom Road	Placer	64.8	65.3 [a]	65	0.4	3.0
East Roseville Parkway	Placer	64.1	66.2 [a]	65	2.1	3.0
Fiddyment Road	Placer	66.1	70.1	65	4.1	3.0
Industrial Avenue	Placer	66.4	69.8	65	3.5	3.0
Ranch View Drive	Placer	54.1	58.5	65	4.4	3.0
Riverside Avenue	Placer	64.7	65.4 [a]	65	0.7	3.0
Roseville Parkway	Placer	61.4	66.1 [a]	65	4.6	3.0
Roseville Parkway	Placer	61.4	66.4 [a]	65	5.0	3.0
Roseville Parkway	Placer	61.4	66.4 [a]	65	5.1	3.0
Taylor Road	Placer	64.7	65.6 [a]	65	0.9	3.0
Woodcreek Oaks Boulevard	Placer	64.4	66.3 [a]	65	1.9	3.0
Woodcreek Oaks Boulevard	Placer	63.3	65.6 [a]	65	2.3	3.0
Vineyard Road	Placer	49.0	53.7	65	4.7	3.0
24th Street	Sacramento	50.5	63.6 [a]	65	13.1	3.0
2nd Avenue	Sacramento	51.7	56.9	65	5.3	3.0
Alta Valley Drive	Sacramento	0.0	59.9	65	59.9	3.0
Antelope Road	Sacramento	54.1	58.2	65	4.2	3.0
Elverta Road	Sacramento	62.3	65.6 [a]	65	3.3	3.0
Miller Way	Sacramento	54.8	58.0	65	3.2	3.0
Rio Linda Boulevard	Sacramento	57.8	60.9	65	3.0	3.0
Walerga Road	Sacramento	65.0	66.2 [a]	65	1.2	3.0
Walerga Road	Sacramento	64.3	65.3 [a]	65	0.9	3.0

Roadway Name	County	Existing (2019) Noise Levels (dBA CNEL)	Existing + Project (2050) Noise Levels (dBA CNEL)	Noise Level Threshold (dBA CNEL)	Modeled Change in Noise Levels (dBA)	Allowable Increase Threshold
Watt Avenue	Sacramento	64.9	69.0	65	4.1	3.0
Bridge Street	Sutter	62.6	65.2 [a]	65	2.6	3.0
Harter Parkway	Sutter	64.6	65.2 [a]	65	0.6	3.0
Hooper Road	Sutter	63.5	65.5 [a]	65	1.9	3.0
Gibson Road	Yolo	64.9	65.2 [a]	65	0.3	3.0
Rural Residential						
Mosquito Road	El Dorado	54.8	55.5	55	0.7	3.0
Ayres Homes Road	Placer	51.9	58.9 [a]	55	7.0	3.0
English Colony Way	Placer	59.3	62.6	55	3.3	3.0
North Dowd Road	Placer	54.1	57.7 [a]	55	3.7	3.0
North Dowd Road	Placer	53.4	60.4 [a]	55	7.0	3.0
Placer Hills Road	Placer	54.4	56.1 [a]	55	1.8	3.0
Riosa Road	Placer	58.8	62.8	55	4.0	3.0
Sunset Boulevard W:W	Placer	67.8	72.0	55	4.2	3.0
Sunset Boulevard W:W	Placer	61.9	66.0	55	4.1	3.0
Wise Road	Placer	60.5	63.5	55	3.1	3.0
Wise Road	Placer	56.0	59.2	55	3.1	3.0
Wise Road	Placer	56.1	60.0	55	3.8	3.0
Wise Road	Placer	55.4	58.9	55	3.4	3.0
Wise Road	Placer	55.2	59.3	55	4.1	3.0
Bercut Street	Sacramento	54.3	61.8 [a]	55	7.4	3.0
Douglas Road	Sacramento	65.3	68.4	55	3.1	3.0
Dry Creek Road	Sacramento	53.3	59.0 [a]	55	5.7	3.0
Franklin Boulevard	Sacramento	64.7	68.9	55	4.2	3.0
Franklin Boulevard	Sacramento	61.5	67.0	55	5.5	3.0
Courtland Road	Yolo	62.7	65.8	55	3.1	3.0
South River Road	Yolo	59.4	63.5	55	4.1	3.0

Notes: dBA = A-weighted decibels; CNEL = community noise equivalent level.

[a] Noise level exceeds the applicable absolute noise level threshold with implementation of the 2025 Blueprint.

Source: Data provided by SACOG 2025; modeled by Ascent in 2025.

As shown in Table 3.12-7, transportation noise increases that would result from the projected land use pattern associated with implementation of the 2025 Blueprint would exceed the applicable CNEL absolute noise level thresholds and/or substantial noise increase thresholds. In addition, as detailed in Chapter 2, "Project Description," most growth associated with the plan would occur within the region's existing developed footprint. There are several roadway segments that exceed noise level standards under existing conditions and would experience additional travel with implementation of the 2025 Blueprint; therefore, though CEQA does not generally require an analysis of a project's impacts on its residents or users, an exacerbation of an existing significant noise impact could occur. Development within the region could result in new sensitive land uses located near these roadway segments. Thus, new sensitive receptors could be exposed to transportation noise levels that exceed applicable land use compatibility thresholds identified in Table 3.12-5 and would be exacerbated with implementation of the 2025 Blueprint.

Stationary Noise

Implementation of the 2025 Blueprint would result in a mixture of development and redevelopment within the land use growth footprint throughout the region. The 2025 Blueprint emphasizes the need for more housing options (e.g., apartments, town homes, mixed-use developments) and promotes the continued buildout of office and industrial parks in regional job centers. While the exact magnitude of increased noise from the introduction of new land uses is speculative, it is foreseeable that in certain locations, the noise associated with new residential, commercial, and industrial land uses under the Development Pattern of the 2025 Blueprint could introduce noise levels that exceed applicable noise standards.

Typical community stationary noise sources associated with residential land use include small mechanical devices for residential maintenance (e.g., lawnmowers, leaf blowers) and HVAC equipment. Noise levels from residential maintenance equipment could range between 88 and 99 dBA at 3 feet (Berger et al 2010). Noise levels from HVAC equipment vary depending on the unit efficiency, size, and location, but generally range from 60 to 70 dBA L_{eq} at 3 feet (Carrier 2022). Commonly installed building equipment, such as HVAC systems, can be located within the interior of a structure, on rooftops, or in direct line-of-sight to adjacent land uses. Depending on the proximity to sensitive receptors, noise levels associated with mechanical devices and HVAC systems could exceed applicable noise standards at nearby noise-sensitive receptors and could result in a substantial increase over existing ambient noise levels (i.e., 5 + dBA).

Stationary noise sources associated with commercial and industrial land uses may include delivery trucks loading and unloading at commercial land uses, large HVAC equipment, and other equipment associated with commercial and industrial land uses (e.g., pumps, backup generators). As discussed above, detailed information regarding the stationary equipment to be installed for new facilities constructed under the 2025 Blueprint is not available. However, noise levels commonly associated with larger commercial-use air conditioning systems can reach levels of up to 78 dBA at 3 feet (Lennox 2020). Reference noise-level measurements of emergency generators with rated power outputs from 50 to 125 kilowatts result in noise levels ranging from 61 to 73 dB L_{eq} and 63 to 84 dB L_{max} at 45 feet (EPA 1971; FHWA 2006). Based on reference noise levels that captured engine idling and loading and unloading activity at a distribution center, noise at loading docks may reach levels of 59 dBA L_{eq} at 100 feet (Ascent 2023). Stationary noise associated with residential, commercial, and industrial development could be higher or lower than the noise levels provided in this section. In addition, the activity level and hours of operation would typically vary by land use. For example, loading docks at new commercial land uses could operate in the early morning when receptors are more sensitive to noise.

The regional growth pattern would result in new land uses that could include stationary noise sources (e.g., HVAC equipment) that expose existing and future sensitive receptors to excessive noise levels or result in a substantial permanent increase in noise. However, the extent of new stationary noise from these land uses cannot currently be quantified, as the magnitude and location of specific sources are not known. While the exact magnitude of increased noise from the introduction of new land uses is speculative, it is foreseeable that in certain locations, the noises associated with residential, commercial, and potentially industrial land uses under the projected land use pattern could introduce a level of noise that exceeds an acceptable noise standard. The increased noise from mechanical systems, industrial and commercial operations, and other stationary sources of community noise could expose existing and future sensitive receptors to noise levels that exceed applicable local thresholds or result in a substantial increase (i.e., 5+ dBA) in noise levels. In addition, as described above, most growth associated with the plan would occur within the region's existing developed footprint. Because the exact locations of development are unknown, implementation of the 2025 Blueprint could result in new sensitive receptors located in areas where noise levels exceed applicable land use compatibility thresholds. Therefore, new sensitive receptors could be exposed to noise levels that exceed applicable land use compatibility thresholds identified in Table 3.12-5.

Transportation Network Improvements and Programs

Roadway noise anticipated to result from the regional growth and development pattern is disclosed in Table 3.12-7. Although these transportation noise impacts are located on transportation infrastructure and represent anticipated travel patterns, the change in roadway noise from a specific transportation network improvement or program cannot be quantified. The 2025 Blueprint proposes a variety of targeted transportation network improvements including

approximately 117 miles of new HOV lanes, 702 new lane miles of roadways, bicycle and pedestrian infrastructure improvements, expanded transit facilities and services, and roadway and bridge maintenance and rehabilitation projects. As detailed in Chapter 2, "Project Description," transit service improvements would include increased frequency (i.e., 15 minute or better service) on over 25 percent of bus routes, major increases in light rail service (e.g., Sacramento-West Sacramento Downtown/Riverfront Transit Project), and expanded ADA paratransit services. The noise effects of transportation network improvements and programs would vary greatly depending on the type of transportation improvement, existing noise levels, and proximity to existing sensitive uses. Due to the regional scale of the 2025 Blueprint and programmatic level of this analysis, site-specific details (e.g., exact location, existing noise levels) for individual transportation network improvement projects are not available; thus, noise impacts associated with transportation network improvements and programs are assessed qualitatively.

New and expanded bus and rail transit are planned to serve supportive land uses with higher density and a mix of uses. Thus, proposed transit improvements would generally occur in more densely developed areas where noise levels are already high from existing transportation and transit systems. In addition, many of these projects may reduce vehicle trips and improve the efficiency of the transportation system. However, as described above, substantial transportation noise is anticipated to result from implementation of the 2025 Blueprint. Expansion of existing or new transportation network projects could result in excessive noise exposure depending on the type of existing land uses and proximity to the new noise sources. Therefore, it is anticipated that implementation of the 2025 Blueprint would result in noise levels that exceed applicable noise thresholds established in Table 3.12-5.

Summary

Implementation of the 2025 Blueprint could result in regional noise increases and localized noise levels that exceed applicable thresholds and result in a substantial permanent increase in noise. Due to the anticipated noise increases and the potential for exposure of new and existing sensitive receptors to noise that exceeds applicable thresholds, this impact would be **significant**.

Mitigation Measures

SACOG does not have the authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measures or other comparable measures identified by the lead agency at a project level would reduce the impacts from noise, and agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081).

Mitigation Measure 3.12-2: Employ Measures to Reduce Traffic Noise

For projects that have not undergone a previous noise study and that exceed applicable noise thresholds, the implementing agency shall require a project-level evaluation of noise impacts in accordance with applicable federal, State, and local noise standards. To reduce exposure from traffic noise when significant impacts are identified, implementing agencies and/or project sponsors shall implement measures, where feasible and necessary based on project- and site-specific considerations to achieve noise levels in accordance with applicable local noise standards. Measures shall include those identified below (or other equally effective measures):

- Design adjustments to proposed roadway or transit alignments to reduce noise levels in noise-sensitive areas (e.g., below-grade roadway alignments can effectively reduce noise levels in nearby areas by providing a barrier between the source and receptor).
- Use traffic-calming measures in the design of transportation improvements.
- Use rubberized asphalt or "quiet pavement" to reduce road noise for new roadway segments, roadways in which widening or other modifications require re-pavement, or normal reconstruction of roadways where re-pavement is planned.
- Maximize the distance between existing noise-sensitive land uses and new noise-generating facilities and transportation systems.

- Construct barriers in the form of outdoor barriers, sound walls, buildings, or earth berms to attenuate noise at adjacent sensitive uses if in compliance with local ordinances or policies.
- Monitor the effectiveness of noise reduction measures by taking noise measurements and installing adaptive mitigation measures to achieve the standards for ambient noise levels established by the noise element of the general plan or noise ordinance.

Mitigation Measure 3.12-3: Employ Measures to Reduce Stationary Noise from New Land Use Projects

To reduce the exposure of existing sensitive receptors to non-transportation noise associated with projected development, implementing agencies and/or project sponsors shall require, for projects with features that generate stationary noise that are near sensitive receptors, a project-level evaluation of noise impacts in accordance with applicable federal, state, and local noise standards. Where significant impacts are identified, applicable mitigation measures shall be implemented to reduce noise to achieve noise levels in accordance with applicable local noise standards. Where feasible and necessary to address site-specific impacts, measures shall be implemented and shall include, but are not limited to, the following:

- maximize the distance between noise-sensitive land uses and new noise-generating facilities;
- improve the acoustical insulation, window quality, and/or other soundproofing of dwelling units (existing or proposed) where setbacks do not sufficiently reduce noise; and
- incorporate noise-reduction features to reduce the average hourly exterior operational noise levels of mechanical equipment at nearby noise-sensitive land uses in compliance with local standards. Noise-reduction measures to be incorporated may include, but are not limited to, setbacks, the selection of alternative or lower noise-generating equipment, relocation of equipment, and use of equipment enclosures.

Mitigation Measure 3.12-4: Reduce Exposure of New Sensitive Receptors to Transportation and Stationary Noise

To prevent future noise sensitive receptors from exposure to excessive noise levels, prior to project approval, project proponents of a sensitive land use shall provide the local jurisdiction with a site-specific noise assessment prepared by a qualified acoustical professional that addresses interior and exterior noise levels at the proposed sensitive land use. The noise assessment shall consider existing noise sources adjacent to the proposed residential structure. If the proposed structure is located within an area with noise levels that exceed applicable noise thresholds for residential land uses, the noise assessment shall confirm, using approved calculation methodologies, that site design and building design are sufficient to comply with applicable interior noise standards. If the assessment shows that such standards would not be met with the design as proposed, the project proponent shall implement recommendations of the assessment that are shown to achieve applicable standards.

Significance after Mitigation

Implementation of Mitigation Measure 3.12-2 would result in substantial reductions in traffic-related noise through design techniques, the use of specific materials (i.e., rubberized asphalt), and construction of noise barriers depending on site-specific conditions. Implementation of Mitigation Measure 3.12-3 would require planning, design, and operational measures to reduce stationary noise sources and to comply with any applicable local noise codes. Mitigation Measure 3.12-4 would reduce the exposure of new sensitive receptors to transportation and stationary noise through site-specific noise assessments. If the implementing agency adopts these mitigation measures, Impact 3.12-2 could be reduced to a less than significant level. Projects taking advantage of CEQA Streamlining provisions of SB 375 (PRC Sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measures described above to address site-specific conditions, resulting in impacts that are less than significant. However, because SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation, this impact would be **significant and unavoidable**.

Impact 3.12-3: Generate Excessive Groundborne Vibration or Groundborne Noise Levels

Because of the nature of vibration impacts (vibration dissipates with distance from the source), construction and operational impacts associated with the projected land use pattern and planned transportation improvements would have vibration impacts, but such potentially significant impacts would be confined to the vicinity of the project site.

Temporary sources of vibration include the use of heavy equipment (e.g., pile drivers) during construction and long-term sources of vibration include buses traveling on roads and transit systems (e.g., commercial railways or passenger rail transit lines). Table 3.12-8 summarizes vibration levels associated with typical construction equipment.

Table 3.12-8 Vibration Levels for Construction Equipment

Construction Equipment	PPV at 25 feet, in/sec	Approximate VdB at 25 feet
Impact Pile Driver – Upper Range	1.518	112
Impact Pile Driver – Typical	0.644	104
Sonic Pile Driver – Upper Range	0.734	105
Sonic Pile Driver – Typical	0.17	93
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Notes: PPV = peak particle velocity; in/sec = inches per second; VdB = vibration decibels.

Source: FTA 2018: Table 7-4.

Counties and cities often establish acceptable hours for construction activities but typically do not establish individual or quantitative thresholds related to construction vibration. FTA and Caltrans establish recommended vibration thresholds to evaluate potential damage to existing structures and potential disturbance to sensitive receptors from vibration activities. This analysis applies the FTA vibration thresholds for human annoyance to frequent events (i.e., 72 VdB) and the Caltrans threshold for structural damage to historic and some old buildings (0.25 in/sec PPV) from continuous/frequent intermittent sources. Construction and operational vibration impacts associated with implementation of the 2025 Blueprint are discussed separately below.

Regional Growth and Land Use Change

Construction Vibration

Construction impacts are considered temporary and localized in nature, as they are limited to the time during which the project is being constructed and confined to areas adjacent to the construction site. Construction of new developments could result in temporary vibration impacts from grading, paving, clearing, landscaping, staging, excavation, earthmoving, and other related construction activities. These types of construction activities require the use of heavy-duty construction equipment (e.g., backhoes, jackhammers) and vehicles that generate significant amounts of vibration in the immediate vicinity of the source. Construction activities may result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and activities involved. The effects of vibration generated by construction activities depend on several factors including the duration and type of construction activities and the distance between source and receptor. Construction activities would comply with applicable jurisdictional standards related to acceptable hours of construction; however, if sensitive receptors are located within the immediate vicinity of construction activities, they could be subject to construction vibration levels that exceed the applicable thresholds for human response.

As shown in Table 3.12-8, vibration levels from construction equipment range between 0.003 in/sec PPV and 1.518 in/sec PPV at 25 feet. According to FTA, vibration levels associated with impact pile driving are 1.518 in/sec PPV at 25 feet. Pile driving is often necessary in the construction of multi-story buildings (e.g., apartment buildings) and thus could be required during land use development projects associated with the 2025 Blueprint. Although pile driving could be required, this analysis assesses potential vibration impacts associated with more typical construction activities that could be used, such as a vibratory roller during paving activities.

Based on FTA recommended procedure for applying a propagation adjustment to these reference levels, vibration levels from a typical pile driver could exceed the Caltrans-recommended threshold of 0.25 in/sec PPV with respect to the structural damage within 48 feet of construction activity and a vibratory roller could exceed this threshold within 23 feet of activity (see Appendix D for modeling details). Because the 2025 Blueprint promotes growth within the region's existing developed footprint (e.g., Center and Corridor Communities and Established Communities), development would occur within already developed areas; thus, the potential exists for pile driving and vibratory rolling to occur within 48 feet and 23 feet, respectively, of an existing historic or older structure, thus exceeding the Caltrans-recommended level of 0.25 in/sec PPV for structural damage.

Vibration levels can also result in interference or annoyance impacts for residences or other land uses where people sleep, such as hotels and hospitals. According to FTA, vibration levels associated with pile driving are 112 VdB at 25 feet and vibration levels associated with vibratory rollers are 94 VdB at 25 feet (FTA 2018). FTA vibration annoyance potential criteria depend on the frequency of the vibration events. When vibration events occur more than 70 times per day, as would likely be the case with pile driving and vibratory rolling, they are considered "frequent events." Frequent events that exceed 72 VdB are considered to result in a significant vibration impact. Based on FTA recommended procedure for applying propagation adjustments to these reference levels, vibration levels from pile driving could exceed FTA's recommended guidance for "frequent events" within 545 feet of an existing sensitive land use (refer to Appendix D for modeling details). Vibratory rollers could exceed the threshold of 72 VdB within 136 feet of activity. Because the 2025 Blueprint promotes growth within established communities, most development would occur within already developed areas; thus, the potential exists for construction activity to occur within these impact distances of existing sensitive land use (e.g., residence, library, school), exceeding FTA-recommended levels for adverse human response.

Because the exact construction details for land use development projects associated with the 2025 Blueprint are currently unknown, the potential exists for impact pile driving to occur within 48 feet of an existing historic structure or older building, and within 545 feet of an existing sensitive land use, and for vibratory rolling to occur within 23 feet of an existing historic structure and within 136 feet of an existing sensitive land use. Thus, construction activity could exceed Caltrans-recommended vibration thresholds for structural damage (i.e., 0.50 in/sec PPV) and FTA-recommended thresholds for adverse human response (i.e., 72 VdB).

Operational Vibration

Land uses generate different amounts of vibration and groundborne noise. For example, industrial uses generate substantially more vibration and groundborne noise than residential and commercial uses, as industrial land uses often operate machinery and other vibration-inducing equipment. Normal operation of residential, commercial, and mixed-use buildings is not likely to generate substantial vibration or groundborne noise. Industrial and public buildings could generate vibration and groundborne noise during operations that involve the use of heavy machinery or other vibration-inducing equipment. However, the amount of vibration produced is not anticipated to be excessive, as workplace vibration is typically addressed from an occupational health and safety perspective. As with noise, vibration dissipates with distance from the source and thus surrounding land uses would unlikely be affected. In addition, new development associated with the 2025 Blueprint would occur in accordance with adopted land use plans and zoning ordinances which typically prohibit vibration-intensive land uses (e.g., industrial) within incompatible (e.g., residential) zones. For these reasons, the vibration and groundborne noise impacts related to the projected land use pattern from implementation of the 2025 Blueprint are not anticipated to exceed applicable thresholds for structural damage or human response.

Transportation Network Improvements and Programs

Construction Vibration

As discussed above, construction activities can generate vibration levels that exceed the thresholds for human response and structural damage depending on their proximity to existing sensitive receptors and structures. The transportation projects proposed under the 2025 Blueprint that would have the greatest potential for physical impacts would include capacity increasing projects that add travel lanes to freeways, expressways, and highways or add new rail, ferry, or bus rapid transit routes and stations. Although the actual footprints and design details of most proposed transportation projects are currently unknown, it is anticipated that pile driving, which is typically required for building large structures such as bridges, could be required. As detailed above, impact pile driving could exceed Caltrans recommended thresholds of 0.25 in/sec PPV for structural damage within 48 feet of construction and the thresholds for adverse human response of 72 VdB within 545 of a sensitive land use (refer to Appendix D for modeling details). More typical construction equipment, such as a vibratory roller, could exceed the Caltrans-recommended thresholds of 0.25 in/sec PPV for structural damage within 23 feet of construction and the thresholds for adverse human response of 72 VdB within 136 of a sensitive land use (refer to Appendix D for modeling details). Construction activities would comply with applicable jurisdictional standards related to acceptable hours of construction; however, if sensitive receptors are located within these impact distances of construction activities, they could be subject to construction vibration levels that exceed the applicable thresholds for structural damage (i.e., 0.25 in/sec PPV) or human response (i.e., 72 VdB), respectively.

Operational Vibration

Transportation infrastructure projects generate varying levels of vibration and groundborne noise. Traffic, especially heavy truck traffic, can be a source of vibration and groundborne noise. However, such vibration is rarely high enough to cause structural damage or result in adverse response, as vehicles are supported on spring suspensions and pneumatic tires, which reduce the amount of vibration and groundborne noise generated from vehicular traffic. Rail operations, including freight and light rail trains, can also be a source of vibration. As detailed in Chapter 2, "Project Description," the 2025 Blueprint would result in implementation of planned transportation improvement in multiple areas within the region and, thus, could increase transit-related vibration as transit lines are expanded and service frequency increased. However, vibration levels would vary greatly depending on the type of transit facility and proximity to existing sensitive land uses.

In some areas within the region, existing development could be exposed to frequent vibration events (i.e., more than 70 trains per day), occurring adjacent to new or expanded rail lines such as those used by Sacramento Regional Transit District, City of West Sacramento, or others. As previously described, FTA provides recommended vibration levels for various land use types based on the frequency of exposure from vibration events (i.e., number of trains passing by a sensitive land use). The FTA-recommended level for which human disturbance would occur in response to frequent vibration events is 72 VdB. Thus, based on the Generalized Ground Surface Vibration graph in the FTA guidance (FTA 2018: Figure 6-4), developments within 200 feet of a railroad could be exposed to vibration levels that exceed the recommended threshold for human disturbance of 72 VdB for frequent vibration events (i.e., 70 or more trains passing by in 1 day). The degree of increased vibration exposure would depend upon the type (diesel or electric powered) and frequency of rail pass-by events and the existing soil conditions at the existing receptor. Expanding or building new transit lines in unserved areas would result in a new vibration source that could result in substantial vibration effects that exceed FTA-recommended levels (i.e., 72 VdB) within 200 feet of the source. For these reasons, implementation of the 2025 Blueprint could result in vibration levels that exceed applicable thresholds for human response.

Summary

Construction of the 2025 Blueprint could generate substantial vibration levels. Pile driving could be required for the construction of multi-story buildings (e.g., apartment buildings) and for bridge repair. Because the exact construction details for land use development projects associated with the 2025 Blueprint are currently unknown, the potential exists for pile driving to occur within 48 feet of an existing historical structure or older building and within 545 feet of an existing sensitive land use, thus exceeding the recommended thresholds for structural damage (i.e., 0.25 in/sec PPV) and human response (i.e., 72 VdB), respectively. In addition, more typical construction equipment (e.g., vibratory roller) could

exceed the thresholds for structural damage and human response with 23 feet and 136 feet, respectively. Implementation of new land use development would not result in substantial sources of operational vibration as these types of land uses typically do not produce noticeable levels of vibration. In addition, land use development would be in accordance with local plans and zoning ordinances in the project area which typically prohibit vibration-intensive land uses in proximity to vibration-sensitive land uses. However, new and expanded transportation infrastructure (i.e., buses, expanded light rail transit) could result in new vibration sources and substantial increases in vibration depending on the proximity to existing sensitive land uses. For these reasons, this impact would be **significant**.

Mitigation Measures

SACOG does not have the authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measures or other comparable measures identified by the lead agency at a project level would reduce the impacts from vibration and groundborne noise, and agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081).

Mitigation Measure 3.12-5: Employ Measures to Reduce Construction Vibration

To reduce construction vibration levels to acceptable levels (i.e., 65 VdB to 80 VdB depending on frequency of event and 0.1 to 0.5 in/sec PPV depending on building type), implementing agencies and/or project sponsors shall implement measures, where feasible and necessary based on project- and site-specific considerations, that include those identified below:

- To minimize disturbance of sensitive receptors (as defined within a local ordinance or general plan) within 545 feet of impact pile-driving activities, implement "quiet" pile-driving technology (such as predrilling of piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions.
- To reduce structural damage, where pile driving is proposed within 48 feet of an existing historical structure, engage a qualified geotechnical engineer and qualified historic preservation professional (for designated historic buildings only) and/or structural engineer to conduct a preconstruction assessment of existing subsurface conditions and the structural integrity of nearby (i.e., within 48 feet) structures that would be exposed to pile-driving activity. If recommended by the preconstruction assessment, for structures or facilities within the impact distance (e.g., 48 feet) of pile-driving activities, the project sponsor shall require ground vibration monitoring of nearby reinforced-concrete, steel, or timber structures. Such methods and technologies shall be based on the specific conditions at the construction site. Conditions will be determined through activities such as the preconstruction surveying of potentially affected historic structures and underpinning of foundations of potentially affected structures, as necessary. The preconstruction assessment shall include a monitoring program to detect ground settlement or lateral movement of structures in the vicinity of pile-driving activities and identify corrective measures to be taken should monitored vibration levels indicate the potential for building damage. In the event of unacceptable ground movement with the potential to cause structural damage, all impact work shall cease, and corrective measures shall be implemented to minimize the risk to the subject, or adjacent, historic structure.
- Restrict construction activities to permitted hours in accordance with local jurisdiction regulations.

Mitigation Measure 3.12-6: Implement Measures to Reduce Operational Vibration from New and Expanded Rail Systems

Project proponents proposing new or expanded rail systems shall undertake a detailed evaluation of vibration and groundborne noise impacts and identify project-specific mitigation measures as necessary to reduce vibration to a level that complies with applicable local standards or FTA standards. To address site-specific conditions to minimize the effects of vibration and groundborne noise from rail operations, the following measures shall be implemented where feasible and necessary:

- complying with all applicable local vibration and groundborne noise standards, or in the absence of such local standards, comply with FTA vibration and groundborne noise standards;
- maximizing the distance between tracks and sensitive uses;

- conducting wheel truing to re-contour wheels to provide a smooth-running surface and removing wheel flats;
- providing special track support systems such as floating slabs, resiliently supported ties, high resilience fasteners, and ballast mats; and
- implementing operational changes such as limiting train speed and reducing nighttime operations.

Significance after Mitigation

Implementation of Mitigation Measures 3.12-5 would reduce vibration impacts associated with construction by requiring the use of quieter pile-driving technology and ensuring that proper actions are taken to minimize vibration impacts to adjacent structures during construction. Mitigation Measure 3.12-6 would minimize vibration and groundborne noise associated with new and expanded rail systems and operations. If the implementing agency adopts these mitigation measures, Impact 3.12-3 could be reduced to less than significant. Projects taking advantage of CEQA Streamlining provisions of SB 375 (PRC Sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measures described above to address site-specific conditions, resulting in impacts that are less than significant. However, because SACOG cannot require the implementing agency to adopt these mitigation measures, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation, this impact would be **significant and unavoidable**.

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3.13 POPULATION, EMPLOYMENT, AND HOUSING

This section provides an overview of existing conditions (environmental and regulatory) including population, employment, and housing in the plan area and evaluates the potential for implementation of the 2025 Blueprint to affect population growth, employment availability, and available housing. Public services such as capacity of fire-protection services, police-protection services, solid waste disposal, parks and recreation, and public schools, and, if such an effect is determined to occur, whether new or expanded facilities are addressed in Section 3.14, "Public Services." Discussion of relevant planning documents as well as existing land use and zoning impacts are discussed in Section 3.10, "Land Use and Planning."

In response to the notice of preparation, SACOG did not receive comments related to population, employment, and housing. During the scoping meeting, participants expressed opinions about housing type and density in the plan, as well as regional housing cost. Comments also highlighted the need for the plan's sustainable communities strategy (SCS) to be consistent with the regional housing needs allocations and housing elements of the various jurisdictions.

3.13.1 Regulatory Setting

FEDERAL

Uniform Relocation Assistance and Real Property Acquisition Policies of 1970

The Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act) (42 US Code Section 4601 et seq.), passed in 1970 and amended in 1987, is intended to provide for uniform and equitable treatment for persons displaced through federally funded or assisted transportation and redevelopment projects that require property acquisition. The act lays out rules for notification, relocation counseling, social services or assistance for disabled residents, and compensation for replacement housing and moving costs. The rules stipulate that replacement housing must be comparable to previous housing in terms of location, size, access to employment and public facilities, and must be "decent, safe, and sanitary." The rules apply if federal funds are used in any phase of the program or project, even if the property acquisition itself is not federally funded.

Fixing America's Surface Transportation and Moving Ahead for Progress in the 21st Century Acts

Under the Fixing America's Surface Transportation (FAST Act) (Public Law 114-94) and the Moving Ahead for Progress in the 21st Century Act (MAP-21 Act) (Public Law 112-141), the US Department of Transportation requires that metropolitan planning organizations, such as SACOG, prepare long-range regional transportation plans (RTPs) and update them every 4 years if they are in areas designated as "nonattainment" or "maintenance" for federal air quality standards. Before enactment of MAP-21, the primary federal requirements regarding RTPs were included in the metropolitan transportation planning rules (Title 23 CFR Part 450 and 49 CFR Part 613). The FAST Act and MAP-21 Act make a number of changes to the statutes that underpin these regulations. With respect to population and housing, the rules and regulations require that RTPs must be developed for a period of not less than 20 years into the future and reflect the most recent assumptions for population, land use, employment, and economic activity.

STATE

Public Housing Project Law

The state Public Housing Project Law, Article 34 of the California Constitution, requires a majority vote of the electorate to approve the development, construction, or acquisition by a public body of any "low rent project" within that jurisdiction. In other words, for any project to be built and/or operated by a public agency where at least 50 percent of the occupants are low-income and rents are restricted to affordable levels, the jurisdiction must seek voter approval.

California Relocation Assistance Act of 1971

The California Relocation Assistance Act (Government Code Section 7260 et seq.) was passed in 1971, following the Uniform Act in 1970 (see discussion of federal regulations above). California's version of the law has similar provisions requiring notification, counseling, social services, and financial assistance for persons displaced by transportation and land redevelopment projects. Under the California act, these procedural protections and benefits apply when the project causing the displacement has received state funding during any phase of the program or project, even if it did not receive federal funding.

Zenovich-Moscone-Chacon Housing and Home Finance Act of 1975

In response to State population and housing growth, the California Department of Housing and Community Development (HCD) is responsible for determining the regional housing need for all jurisdictions in California to ensure the availability of affordable housing for all income groups.

State Housing Element Law

State law requires that each city and county prepare and adopt a general plan for its jurisdiction that contains certain mandatory elements, including a housing element. Housing element law requires local governments to adequately plan to meet their existing and projected housing needs. Pursuant to Government Code Section 65580, a Housing Element of a General Plan must contain local commitments to:

- provide sites with appropriate zoning and development standards, and with services and facilities to accommodate the jurisdiction's Regional Housing Needs Allocation (RHNA) for each income level; the RHNA is the only population and/or housing requirement that applies to the General Plan;
- assist in the development of adequate housing to meet the needs of lower- and moderate-income households;
- address and, where appropriate and legally possible, remove governmental constraints to the maintenance, improvement, and development of housing, including housing for all income levels and housing for persons with disabilities;
- conserve and improve the condition of the existing affordable housing stock;
- promote housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, familial status, or disability; and
- preserve assisted housing developments for lower income households.

State Housing Element law mandates specific topics and issues that must be addressed in the Housing Element. These include:

- an analysis of population and employment trends, documentation of projections, and quantification of existing and projected housing needs for all income levels;
- an analysis and documentation of household characteristics, such as the age of housing stock, tenancy type, overcrowded conditions, and the level of payment compared to ability to pay;
- an analysis and documentation of special needs, such as female-headed households, homeless individuals, persons with disabilities, large households, farmworkers, and the elderly;
- a regional share of the total regional housing need for all income categories;
- an inventory of land suitable for residential development, including vacant land and infill/redevelopment opportunities; this analysis also looks at potential residential sites and their accessibility to adequate infrastructure and services;
- identifying actual and potential governmental and nongovernmental constraints that could potentially impede the maintenance, improvement, and development of housing for all income groups;
- identifying and analyzing opportunities for energy conservation in residential developments;

- an inventory of at-risk affordable units that have the possibility of converting to market rate; and
- a statement of goals, policies, quantified objectives, financial resources, and scheduled programs for the improvement, maintenance, and development of housing.

SB 2, effective as of January 1, 2008, amended state housing element law regarding shelter for homeless persons. The legislation requires that every jurisdiction identify potential zones where emergency shelters are allowed as a permitted use without discretionary review. It also added new requirements for local governments to treat emergency shelter facilities and transitional housing or supportive housing developments the same as other residential uses of the same type in the same zone.

A copy of the draft housing element for each jurisdiction must be sent to the HCD for review and comment before it may be adopted by the city or county. HCD will advise the local jurisdiction regarding whether the draft housing element substantially complies with Housing Element Law (Government Code Section 65580 et seq.). A housing element determined by HCD to be in substantial compliance is presumed to meet the requirements of Housing Element Law.

Several statutory changes related to state housing element law were enacted January 1, 2018, as part of the 2017 Legislative Housing Package. These changes included SB 35 (Chapter 366, Statutes of 2017), which creates a streamlined approval process for specific housing developments in localities that have not yet met their housing targets; AB 1397 (Chapter 375, Statutes of 2017), which requires cities to zone more appropriately for their share of regional housing needs and in certain circumstances requires by-right development; and SB 166 (Chapter 367, Statutes of 2017), which requires a city or county to identify additional low-income housing sites in their housing element when market-rate housing is developed on a site currently identified for low-income housing. Other new/revised statutes address the creation and preservation of affordable housing, housing element accountability and enforcement, and processes to streamline housing development.

Since 2018, additional statutory changes related to state housing element law were enacted to combat California's housing supply shortage. This includes AB 686 (Chapter 368, Statutes of 2017), which creates new requirements for all state and local agencies to ensure that their laws and programs further fair housing. AB 686 also creates new requirements in Housing Element Law including the requirement that all housing elements must include a program that promotes and affirmatively furthers fair housing opportunities for all residents and that all Housing Elements submitted after January 1, 2021 must include an Assessment of Fair Housing consistent with the core elements of the US Department of Housing and Urban Development (HUD) Affirmatively Furthering Fair Housing Final Rule. In addition, other statutory changes include SB 6 (Chapter 659, Statues of 2019) which requires local planning agencies to submit copies of the inventory of land suitable and available for residential development to HUD. AB 1486 expanded on the definition of "local agency" to include sewer, water, utility and local and regional parks, joint power authorities, or other political subdivisions and revised the requirements of the site inventory table of lands suitable for residential development.

Regional Housing Needs Assessment

SACOG, like all other councils of governments in the state, receives an overall regional housing assessment from HCD and must develop a methodology for calculating and distributing to each jurisdiction its fair share of the assessment figure. Each city and county in the plan area will receive an allocation of housing units, which it must accommodate with an 8-year zoned land supply. For the RHNA, SACOG must also plan for the Tahoe Basin portions of El Dorado and Placer counties, which are outside of the plan area of the 2025 Blueprint. Allocations are distributed to each jurisdiction based on the state-defined economic categories: very low-income, low-income, moderate-income, and above moderate-income. The sum of the allocations of these four categories must equal the overall allocation for that jurisdiction. Each jurisdiction must then develop its housing element to address how it will zone for enough housing units during the 8t-year period to meet the overall allocation and allocations by income category.

The Sustainable Communities and Climate Protection Act of 2008

The Sustainable Communities and Climate Protection Act of 2008 (SB 375) (Chapter 728, Statutes of 2008) required, in part, the preparation of a SCS as part of the RTP. Among other things, the SCS must identify areas within the

region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period of the RTP, taking into account net migration into the region, population growth, household formation, and employment growth (Government Code Section 65080). Under SB 375, preparation of the RHNA is coordinated with preparation of the SCS. The RHNA must allocate housing units consistent with the SCS development pattern (Government Code Section 65584.04[i]). The SCS is required to use the most recent planning assumptions considering general plans and other factors (Government Code Section 65080[b][2][B]).

Under SB 375, MPO schedules to adopt RTPs that determine regional housing needs assessments and housing-element due dates are differentiated based on the region's air quality attainment status for one or more pollutants regulated by the federal Clean Air Act. "Non-attainment" MPOs, such as SACOG, adopt RTPs every 4 years. Regional housing needs assessments and housing-element schedules must be coordinated with every other RTP, requiring housing elements be updated every 8 years and no later than 18 months after RTP adoption. The preparation of the 2025 Blueprint coincides with Cycle 6 of the RHNA for SACOG (June 30, 2021 to August 31, 2029).

California Building Standards Code

The minimum standards for structural design and construction in the State of California are identified in the California Building Code (CCR Title 24). The 2022 triennial edition of Title 24 was published July 1, 2022 with an effective date of January 1, 2023. Information Bulletins 22-01 and 22-05 provide detailed information concerning changes to the 2022 publication. The 2022 California Building Standards Code contains the following 12 codes: Building, Residential, Electrical, Plumbing, Administrative, Mechanical, Energy, Historical Building, Fire, Existing Building, Green Building Standards (CALGreen), and the Reference Standards Code. These codes promote public health and safety and ensure that safe and decent housing is constructed in the SACOG region. The 2022 triennial edition remains in effect until the effective date of the 2025 triennial edition, which will become effective January 1, 2026.

LOCAL

Local Housing Elements

The Housing Element is one of the eight mandated elements of the local general plan, but it is the only element that must be certified by the State of California. Housing element law, enacted in 1969, mandates that local governments adequately plan to meet the existing and projected housing needs of all economic segments of the community. The law acknowledges that, in order for the private market to address adequate housing needs and demand, local governments must adopt land use plans and regulatory systems, which provide opportunities for, and do not unduly constrain, housing development. Though required by state law, this element (like others) is implemented at the local level. As a result, housing policy in the state rests largely upon the effective implementation of local general plans and, in particular, local housing elements. Table 3.13-1 lists the current status of housing element adoption and compliance in the plan area.

Table 3.13-1 Status of Housing Elements in the Plan Area

Jurisdiction	Housing Element Status	Date Received	Date Reviewed	Compliance Status
Auburn	Adopted	6/3/2021	8/26/2021	In
Citrus Heights	Adopted	5/28/2021	8/18/2021	In
Colfax	Adopted	10/5/2021	12/27/2021	In
Davis	Adopted	12/14/2023	2/8/2024	In
El Dorado County	Adopted	3/23/2022	5/10/2022	In
Elk Grove	Adopted	12/13/2021	2/16/2022	In
Folsom	Adopted	8/27/2021	10/22/2021	In
Galt	Adopted	5/4/2022	5/12/2022	In
Isleton	Adopted	10/6/2022	12/5/2022	In

Jurisdiction	Housing Element Status	Date Received	Date Reviewed	Compliance Status
Lincoln	Adopted	5/21/2021	8/12/2021	In
Live Oak	Subsequent Draft	9/25/2024	11/24/2024	Out
Loomis	Adopted	8/25/2021	11/19/2021	In
Marysville	Adopted	12/10/2021	2/2/2022	In
Placer County	In Review	12/24/2024	—	In
Placerville	Adopted	12/20/2022	12/21/2022	In
Rancho Cordova	Adopted	6/30/2021	9/27/2021	In
Rocklin	Adopted	9/1/2021	11/29/2021	In
Roseville	Adopted	8/19/2021	11/17/2021	In
Sacramento	Adopted	12/14/2021	12/22/2021	In
Sacramento County	Adopted	3/10/2022	5/9/2022	In
South Lake Tahoe	Adopted	7/7/2022	8/30/2022	In
Sutter County	Adopted	8/16/2021	11/9/2021	In
West Sacramento	Adopted	11/30/2021	2/16/2022	In
Wheatland	Adopted	4/30/2024	5/2/2024	In
Winters	Adopted	3/29/2022	5/11/2022	In
Woodland	Adopted	4/3/2023	4/28/2023	In
Yolo County	Adopted	9/24/2021	12/21/2021	In
Yuba City	Adopted	3/16/2022	5/5/2022	In
Yuba County	Adopted	9/14/2021	12/10/2021	In

Source: California Housing and Community Development Department 2025.

3.13.2 Environmental Setting

POPULATION AND POPULATION GROWTH

The Regional Growth Projection in the 2025 Blueprint indicates that the 2020 baseline population within the six counties, excluding the Tahoe Basin, was 2,540,353, representing an approximately 15 percent increase since 2008 (2,215,044). This is much higher than the growth rate of the state of California, which grew about 8 percent over the same period to a population of 39,538,223 in 2020. As of 2020, the plan area was home to about 6 percent of the population in California (California Department of Finance 2024).

The population centers of the region are located in and around the region's geographic center. Approximately 62 percent of the region's population lives in incorporated cities, of which the cities of Sacramento, Elk Grove, and Roseville are most populous. Unincorporated Sacramento County is home to 606,066 people, making it the most populous of the jurisdictions in the region. The City of Sacramento, with approximately 517,176 residents, is the most populous incorporated city in the region, followed by Elk Grove, Roseville, and Citrus Heights, which are all located close to the urban core. The least populous cities are located near the geographic edge of the region and include the cities of Isleton, Colfax, Winters, and Wheatland. Table 3.13-2 provides the 2020 population, housing units, and employment for the region.

Table 3.13-2 Existing Population, Housing Units, and Employees by Jurisdiction

Jurisdiction	Population[1]	Housing Units	Employees	Jobs/Housing Ratio
El Dorado[2]	**163,098**	**67,050**	**51,574**	**0.8**
Placerville	10,005	4,650	10,920	2.3
Unincorporated county	153,093	62,400	40,654	0.7
Placer[2]	**391,779**	**155,919**	**174,053**	**1.1**
Auburn	13,060	6,340	9,875	1.6
Colfax	2,087	917	860	0.9
Lincoln	51,986	20,013	10,380	0.5
Loomis	6,595	2,537	4,290	1.7
Rocklin	73,783	25,711	24,143	0.9
Roseville	144,301	55,308	83,032	1.5
Unincorporated county	99,967	45,093	41,473	0.9
Sacramento	**1,579,196**	**584,194**	**729,535**	**1.2**
Citrus Heights	88,937	35,625	21,933	0.6
Elk Grove	180,439	55,411	46,297	0.8
Folsom	77,907	29,092	46,842	1.6
Galt	27,010	8,779	5,913	0.7
Isleton	504	423	178	0.4
Rancho Cordova	81,157	27,943	63,671	2.2
Sacramento (City)	517,176	202,299	329,972	1.6
Unincorporated County	606,066	224,622	214,728	1.0
Sutter	**99,225**	**34,732**	**35,180**	**1.0**
Live Oak	11,177	3,120	1,0400	0.4
Yuba City	74,295	26,387	28,420	1.1
Unincorporated county	13,753	5,225	5,360	1.0
Yolo	**224,222**	**80,060**	**113,300**	**1.4**
Davis	70,479	27,344	24,059	0.9
West Sacramento	55,926	20,360	37,475	1.8
Winters	8,029	2,550	2,431	1.0
Woodland	63,913	21,888	28,080	1.3
Unincorporated county	25,875	7,918	21,276	2.7
Yuba	**82,833**	**29,660**	**23,907**	**0.8**
Marysville	12,400	5,445	8,330	1.5
Wheatland	3,946	1,428	779	0.5
Unincorporated county	66,487	22,787	14,798	0.6
Region Total	**2,540,353**	**951,615**	**1,127,549**	**1.2[3]**

[1] Population estimates for 2020 are based on persons per household rates by housing type; County totals are for incorporated cities and unincorporated areas.

[2] Excludes Tahoe Basin.

[3] This value represents an average of the Jobs/Housing ratio throughout the plan area.

Source: Data compiled by SACOG in 2025.

Similar to the rest of the state and nation, population growth in the plan area has slowed (from a high of over 50,000 a year in the early 2000s to less than 20,000 a year during the great recession). In the last 5 years (2020-2025, post-COVID), the region's population growth had steadied, adding between 25,000 to 30,000 new residents per year. The plan area is among fastest growing in the state, along with the San Joaquin area. In short, the plan area has had a higher annual growth rate than the rest of the state, but still lower than what the region witnessed in the early part of the millennium.

EMPLOYMENT AND EMPLOYMENT CENTERS

The Center for the Continuing Study of the California Economy (CCSCE) methodology utilized in this analysis projects employment growth in the plan area in relation to job growth (or decline) projected at the national and state level. The baseline CCSCE projection sees jobs in the plan area growing slightly faster than jobs in the state to 2050, while jobs in the state are projected to grow faster than jobs in the nation. However, job growth in each geography is projected to be slow in terms of average annual growth compared to the prior 30 years. The growth rates from 2019 to 2050 are far lower than the growth rate since 1990 for all geographies (national, state, regional). In the projection, growth is slowing as the population ages and birth rates decline. There will be fewer births, more deaths, and a smaller share of the population in the workforce. Average annual growth will slow to roughly half the growth rate from the past 30 years.

CCSCE developed national job projections by approximately 100 individual industries utilizing the REMI 2050 projections, the Bureau of Labor Statistics (BLS) projections to 2030 and CCSCE's expert judgment. The CCSCE projection sees California adding jobs at a faster rate than the nation. The state is projected to capture 12.4 percent of the nation's jobs in 2050, up from 12.0 percent in 2018 and 11.9 percent in 2019. The state has captured an increasing share of national jobs in recent years on the strength of the state's economic base.

The region is projected to have 6.2 percent of jobs in California in 2050, up from 6 percent in 2018 and 2019. As mentioned in the opening, the base year for these projections is 2020 (post pandemic) though pandemic effects were considered in developing the projections.

HOUSING UNITS AND VACANCY

Like the rest of the state, the region hasn't been building enough housing to keep up with demand. From 2009 onward the plan area has added about 65,000 new housing units or about a 0.5 percent annual average growth. The region would have needed to add an additional 80,000 units in that timeframe (or about 6,500 more units per year above what is has been building) just to meet the new population growth. This indicator only compares new housing to new population and does not account for any existing housing shortage. Each year the region underproduces housing adds to the cumulative impact of the housing shortage.

Of all housing types, attached housing[1] is the most underproduced in the region relative to regional goals. This differs from the coastal areas of the state (i.e., there has been a divergence between the coast and inland areas in production of new housing by product type). However, the North State Building Industry Association (BIA) believe their housing inventory database could show more momentum around attached housing production in the Sacramento region than the cited DOF data (CCSCE 2021).

While housing in the plan area is less expensive relative to the large coastal areas of the state, it is more expensive compared to the nation at large. Zillow estimated in 2020 the typical value of homes in the United States at about $262,000, compared to about $440,000 in the Sacramento Metropolitan Statistical Area. Recent data shows that the plan area had the highest increase in average rent of the 18 studied fellow mid-sized regions (CCSCE 2021). This indicates that renters in the region are very susceptible to housing cost burden. Housing cost burden in this instance is defined as households paying more the 30 percent of gross income to cover housing.

[1] Attached housing refers to housing or dwelling units that share one or more walls with adjacent properties. Examples of attached housing include townhomes, duplexes, or rowhouses.

Recent work completed for the region's comprehensive economic development strategy shows how housing cost increases have greatly outpaced wage growth in the region (CCSCE 2021). When paired with income, the region's housing costs burden is dramatic and looks more like the coastal regions of the state which typically have higher housing costs but also higher incomes.

JOBS/HOUSING BALANCE

The plan area is currently underproducing housing relative to the changes in population and jobs in the last 20 years. However, new projections have indicated that the regional household production rate will exceed the projected population and jobs growth rate through 2050, as the region responds to pent up demand, provides more housing choices for a changing (and aging) demographic, and benefits from supportive policies at both the regional and state level.

Since adoption of the previous MTP/SCS, many jurisdictions in the region have been implementing the MTP/SCS principles, which encourage compact, mixed-use development, a variety of housing types and transportation modes, quality design, and natural resource conservation. While all jurisdictions are striving to achieve the MTP/SCS goals, regional variations in population, housing, and employment patterns still exist because these goals are being implemented in a way that is appropriate based on topography, economy, local regulations, community preference, or other factors specific to a jurisdiction. Growing with the same goals in mind does not mean growing in the same way. Such variations are apparent when comparing centralized, urban areas of the region with more rural, agricultural-based areas.

A metric commonly used to estimate whether housing development is keeping pace with surrounding job growth is a jobs to housing (jobs/housing) ratio. The current consensus among experts is that a healthy jobs/housing ratio is approximately 1.5, meaning that there are six jobs for every four households in a given area (Weitz 2003). However, the context of existing conditions plays a significant factor in determining what an "ideal" jobs/housing ratio is and may vary depending on the size of the area, the types of jobs available, as well as other factors. The following paragraphs describe the existing housing and employment trends including the current jobs/housing ratios within each of the six counties in the plan area.

El Dorado County

Historically, El Dorado County has maintained a lower ratio of jobs to housing. The majority of the county's recent residential and employment growth has occurred in the unincorporated communities of El Dorado Hills and Cameron Park at the western edge of the county. These new communities are characterized by low-density residential and commercial development. However, in recent years, new business parks and mixed-use developments have also emerged in El Dorado Hills. As of 2020, the jobs/housing ratio is 0.7.

Placer County

Placer County's population has historically been concentrated along the southwest section of the Interstate-80 (I-80) corridor (i.e., Roseville, Rocklin, and Granite Bay), with tapering population densities towards the eastern end of the corridor (i.e., Colfax and Foresthill). The southwest Placer communities of Roseville and Rocklin have remained as regional job centers over the past several years, due to sustained residential growth within and surrounding those communities. As of 2020, the jobs/housing ratio is 1.0.

Sacramento County

Sacramento County is the region's population center, including both the largest city (i.e., City of Sacramento) and unincorporated area (i.e., County of Sacramento) within the region. Sacramento County housed 62 percent of the region's population in 2020. Sacramento County, and the cities therein, also contained a majority of the region's housing (61 percent) and employment (65 percent) in 2020. As of 2020 the jobs/housing ratio is 1.1.

Sutter County

Sutter County is largely agricultural and is somewhat removed from the urbanized core of the region. Housing development has generally occurred within or contiguous to the two incorporated cities of Live Oak and Yuba City, in accordance with the county's general plan policies for urban development. There is also single-family housing in the unincorporated county, though at rural densities in accordance with the provisions of agricultural zoning districts. As of 2020, the jobs/housing ratio is 0.9.

Yolo County

Yolo County and its jurisdictions have traditionally maintained strong land use policies to focus urban development towards incorporated cities and unincorporated communities such as Capay, Clarksburg, Dunnigan, Esparto, Guinda, Knights Landing, Madison, and Yolo. The highest population and housing densities are currently in the City of Davis and the adjacent University of California at Davis due to the large student population, followed by the City of West Sacramento. Much of the employment is located in the cities of West Sacramento and Woodland. As of 2020, the jobs/housing ratio is 1.3.

Yuba County

Although historically an agricultural area, the Highway 70 corridor in unincorporated Yuba County and the City of Wheatland have seen several large residential developments. The county's current employment centers are the City of Marysville and Beale Air Force Base. As of 2020, the jobs/housing ratio is 0.7.

3.13.3 Environmental Analysis

METHODOLOGY

The 2025 Blueprint is evaluated to determine whether the regional growth pattern and planned transportation improvements of the 2025 Blueprint would cause physical displacement of substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Displacement risk is a function of the location and availability of affordable housing near major job centers in a growing regional economy. The 2025 Blueprint uses a 2020 baseline for growth forecasting because 2020 is the most recent year for which comprehensive land use and demographic data are available for the plan area. The housing units, employee, and land use data (which SACOG compiles at a parcel level) come from a variety sources including the 2020 U.S. Census Bureau American Community Survey's average 5-year, estimates local government inventories (where available), assessor data, and aerial photography. Although this Draft EIR uses existing conditions as a baseline in order to accurately evaluate the environmental impacts of the project, the analysis in this section is based on the land use and demographic data compiled by SACOG for the 2025 Blueprint.

As the growth in jobs (particularly those that pay higher wages) outpaces the supply of housing (particularly those that are affordable to lower-income households), the cost of housing inevitably rises faster than wages for all workers. In such market conditions, higher-income workers are better positioned to compete for the limited supply of housing opportunities, resulting in a higher risk of displacement for all other residents. To the extent that the private or public sectors can provide more market-rate and deed-restricted affordable housing in these communities, this risk subsides. Displacement risk for lower-income residents may increase because of other reasons as well. These include:

- physical constraints such as a lack of available land for new housing in communities that have a significant number of jobs, with the resulting potential for redevelopment of existing residential areas with new employment or residential development;
- policy constraints such as regulations that hinder environmentally-sound development of infill sites;
- lack of other sites that could support higher-density housing, and inadequate public spending on housing and transportation infrastructure;
- social constraints such as local community opposition to higher-density rental housing; and

- economic conditions, such as high land and labor costs, loss of household income as a result of a shrinking market for middle-wage jobs, and competition for available land from other uses.

CEQA requires analysis and mitigation of potentially substantial adverse changes in the physical environment (PRC Sections 21151, 21060.5, and 21068). "Economic and social changes resulting from a project are not treated as significant environmental effects [citation] and, thus, need not be mitigated or avoided under CEQA." (*San Franciscans for Reasonable Growth v. City and County of San Francisco* [1984] 209 Cal.App.3d 1502, 1516.). Physical changes in the environment caused by economic or social effects of a project may constitute significant environmental effects (CEQA Guidelines Sections 15131 and 15064[e]). Social and economic effects in and of themselves, however, are not significant effects on the environment under CEQA. (*Melom v. City of Madera* [2010] 183 Cal.App.4th 41, 55.).

To the extent households are indirectly displaced and move to new housing because of social or economic factors (e.g., increasing rents), household travel behavior and associated environmental impacts on air quality, greenhouse gas emissions, transportation, and noise would be affected. It is assumed that these impacts associated with indirect displacement would occur within the plan area as displaced individuals would relocate to more urbanized areas, consistent with the Development Pattern of the 2025 Blueprint, and therefore the environmental impacts of indirect displacement are analyzed in other sections of this Draft EIR as part of the overall analysis of the 2025 Blueprint. Such indirect impacts of physical displacement are not addressed further in this section.

The impact analysis takes into account the methodology used to create the Development Pattern of the 2025 Blueprint, which is the result of a technical process that included local agency plans and development codes, coordination with local agency planning departments and stakeholders, consideration of market and policy/regulatory factors, and direction from the SACOG Board of Directors. The land use forecast methodology is described in more detail in Section 2.6.1, "Development Pattern," of this Draft EIR and in Appendix C: Land Use Forecast and D; Land Use Forecast Documentation, of the 2025 Blueprint.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, the project could have a significant adverse effect related to population, employment, and housing if it would:

- induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure); and/or
- displace substantial numbers of existing people or homes, necessitating the construction of replacement housing elsewhere.

ISSUES NOT DISCUSSED FURTHER

All of the topics identified in the significance criteria above are addressed in the following analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.13-1: Induce Substantial Unplanned Population Growth in an Area, either Directly or Indirectly; and/or Displace Substantial Numbers of Existing People or Housing, Necessitating the Construction of Replacement Housing Elsewhere

Regional Growth and Land Use Change

Regional displacement is addressed by SB 375, which requires that the 2025 Blueprint identify areas in the region sufficient to house all of the population of the region. The 2025 Blueprint accomplishes this through the methodology for the Development Pattern and transportation system, which analyzes a regional economic forecast of employees and population to determine how much housing and employment is required to accommodate

projected growth. The 2025 Blueprint allocates the housing needed to accommodate the growth throughout the region. This method, in conjunction with vacancy factors applied in the regional travel model to simulate market conditions, identifies areas in the region to accommodate sufficient housing supply in the 2025 Blueprint for the population expected to reside in the plan area through 2050 and minimize unplanned growth. While some existing people or housing units may be displaced in the plan area, the regional forecast and allocation of growth accommodate the housing demand and transportation system necessary to support the entire population projected during the planning period.

The 2025 Blueprint uses the adopted and proposed land use plans including general plans from the cities and counties of the SACOG region to help determine where the housing and employment growth is likely to occur. As required by State regulations, Housing Elements are required to analyze population and employment trends and include an adequate number of sites with the appropriate zoning and development standards to facilitate the construction of new housing to meet assigned RHNA allocations. Housing Elements are also required to include an inventory of land suitable for residential development, including vacant land and infill/redevelopment opportunities. The 2025 Blueprint concentrates growth in and near existing developed areas, near high frequency transit, and in areas that would improve local jobs/housing balances (e.g., locating new homes near existing jobs or new jobs near existing homes) to avoid unplanned population growth and remain consistent with these adopted local land use plans. The projected land use pattern is a realistic forecast of the expected growth in the region that also supports fundamental objectives of the 2025 Blueprint, including continuing encouragement of the original Blueprint vision through a smart land use pattern, achieving the GHG emissions reduction targets of SB 375, and locating growth near existing infrastructure to improve the financial stewardship of the transportation system.

To achieve these objectives, the land use forecast focuses on housing and employment growth in areas of existing development with capacity to accommodate this new growth. Although much of the growth is expected to occur through infill of vacant lots, some of the growth may occur through the redevelopment of existing buildings. To model the potential extent of redevelopment, SACOG's land use forecasting methodology identifies non-residential parcels for potential redevelopment by screening for a high land-value-to-structure-value ratio and a general plan designation that is higher value than the existing use (e.g., a commercial designation and an existing industrial use). However, this modeling exercise is not intended to dictate the exact parcels that may be redeveloped over the planning period and, therefore, the 2025 Blueprint does not forecast the amount of housing and population that may be displaced by future land use changes or inducing unplanned growth in the plan area. Instead, it assumes that the population and jobs forecast used to inform regional housing development is enough to meet the housing needs of that forecasted population, taking into account localized displacement of some people or housing units. The forecast and subsequent allocation of regional housing is enough to meet the demand. As such, the 2025 Blueprint would not induce substantial unplanned growth and would accommodate any displacement that may occur without the need for new replacement housing to be constructed elsewhere.

Areas that are already considered as developed are forecasted to experience more infill and redevelopment as compared to the region, which could displace more people and housing as a result of the implementation of the 2025 Blueprint. While some existing homes and residents may be displaced in the plan area, the regional forecast and allocation of growth (as described above in the regional impacts section) accommodate the housing demand and transportation system necessary to support the entire population projected during the planning period. The allocation of regional housing is enough to meet demand, including that created through infill and redevelopment. Any displacement that occurs due to the projected land use pattern or planned transportation improvements in the 2025 Blueprint would not result in the need to construct new replacement housing beyond what is already included with the plan.

Adoption of the 2025 Blueprint does not authorize or provide entitlements to redevelopment or construction projects in the plan area. Rather, the 2025 Blueprint is a regional strategy that sets a vision for future development, which must still be reviewed, analyzed, and approved by local governments, which retain full control over local land use authority. In addition, any project-level redevelopment that uses federal or state funds must follow the Uniform Act and the California Relocation Assistance Act to address the displacement of people or housing.

Transportation Network Improvements and Programs

The 2025 Blueprint planned transportation improvements are developed to most efficiently meet the demands created by the forecasted growth in population and jobs and focus mainly on the existing regional transportation system. Planned transportation improvements would largely be constructed within existing rights-of-way and with minimal to no acquisition of land, with acquired lands typically consisting of areas immediately adjacent to existing rights-of-way that does not contain residential housing units. In rare cases, residential structures may have to be removed to make way for new or expanded transportation facilities. In other cases, certain planned transportation improvements could permanently alter the characteristics and qualities of a neighborhood and introduce new growth. The degree of the disruption would generally depend on the size and extent of the transportation improvement and the associated need to acquire new right-of-way. The transportation project list includes multiple capacity increasing projects that have the potential to induce growth as a result of implementation. However, the 2025 Blueprint was designed to be consistent with local land use planning documents which would account for any growth associated with the implementation of these capacity increasing projects. In any case, the potential for displacement and induced growth are considerations in the final design of individual planned transportation improvements and may be addressed in the project-level environmental review and mitigation process. From the regional perspective, it is assumed that some residential displacement and induced growth would occur. However, because the proposed projects have not yet been designed, the exact number and location of displacements or extent of the induced growth cannot be known at this time and any attempt to predict them would be speculative.

Therefore, the planned transportation improvements of the 2025 Blueprint are not anticipated to result in the displacement of substantial numbers of existing people or housing within areas that are considered as developed that would require the construction of new replacement housing elsewhere.

Summary

As discussed above, improvements associated with the 2025 Blueprint would be focused in developed areas where growth is anticipated and would avoid unplanned population growth and the displacement of existing residents. Therefore, the 2025 Blueprint would not result in the potential for regional impacts associated with displacement of substantial numbers of people or housing that results in construction of replacement housing elsewhere. Furthermore, the 2025 Blueprint would not result in the potential for substantial induced unplanned population growth in an area, either directly or indirectly. Since the 2025 Blueprint is expressly designed to avoid this impact, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

3.14 PUBLIC SERVICES

This section describes the existing conditions (environmental and regulatory) and evaluates the potential public services impacts of the 2025 Blueprint. The public services addressed in the analysis include fire protection, police protection, emergency services, schools, libraries, and social services. Other publicly provided utility services, such as water and wastewater treatment, stormwater management, electricity, and natural-gas services, are addressed in Section 3.17, "Utilities and Service Systems." The plan area contains monuments, parks, forests, wilderness areas, and trails of national, state, and local levels. Discussions regarding recreation facilities in the plan area, including parks, trails, fishing, and water recreation, are addressed in Section 3.15, "Recreation." In response to the notice of preparation, SACOG received no comments related to public services resources.

3.14.1 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws related to public services are applicable to the 2025 Blueprint.

STATE

Community Facilities Act of 1982, as Amended

The Community Facilities Act of 1982 (Government Code Section 53324), also commonly known as the Mello-Roos Act, enables certain public agencies to designate a Mello-Roos Community Facilities District, which allows for the financing of public improvements and services. These include basic infrastructure, police protection, fire protection, ambulance services, schools, parks, libraries, museums, and other cultural facilities. Mello-Roos Community Facilities Districts are usually created to finance improvements and services when no other funding sources are available and require a two-thirds majority vote of residents living within the proposed boundaries. They are used especially often (but not exclusively) in new development areas.

Mutual Aid Agreements

The Emergency Managers Mutual Aid (EMMA) system is a collaborated effort between city and county emergency managers in the Office of Emergency Services in the coastal, southern, and inland regions of the state. EMMA provides service in the emergency response and recovery efforts at the Inland Regional Emergency Operations Center, local Emergency Operations Centers, the Disaster Field Office, and community service centers. The purpose of EMMA is to support disaster operations in affected jurisdictions by providing professional emergency management personnel. In accordance with the California Disaster and Civil Defense Master Mutual Aid Agreement, local and state emergency managers have responded in support of each other under a variety of plans and procedures.

Assembly Bill 2926, Chapter 887, Statutes of 1986

In 1986, AB 2926 (Statutes of 1986, chapter 887) authorized the levy of statutory fees on new residential, commercial, and industrial development in order to pay for school facilities.

California Government Code Section 65995

California Government Code Section 65995 authorizes school districts to collect impact fees from developers of new residential and commercial/industrial building space to offset costs associated with increasing school capacity as a result of development.

Leroy Greene School Facilities Act of 1998

The Leroy Greene School Facilities Act, Chapter 407, Statutes of 1998 (SB 50) (Education Code Sections 17070.10–17079.30) eliminated the ability of cities and counties to require full mitigation of school impacts and replaced it with

the ability for school districts to assess fees directly to offset the costs associated with increasing school capacity resulting from new development. The act states that payment of developer fees is "deemed to be complete and full mitigation" of the impacts of new development.

Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000

The Cortese-Knox-Hertzberg Local Government Reorganization Act (Government Code Section 56000 et seq.) establishes the process through which local agency boundaries are established and revised. Each county must have a local agency formation commission (LAFCo), which is the agency that has the responsibility to create orderly local government boundaries, with the goal of encouraging "planned, well-ordered, efficient urban development patterns," the preservation of open space lands, and the discouragement of urban sprawl. A LAFCo typically consists of two county supervisors, two representatives of the county's cities, and one member of the public. Many LAFCos also include one special district representative.

While LAFCos have no land use power, their actions determine which local government will be responsible for planning new areas. LAFCos address a wide range of boundary actions, including, adjustments to boundaries of special districts.

California Code of Regulations

Title 8, Section 1270 and 6773

In accordance with the CCR, Title 8 Sections 1270 Fire Prevention and 6773 Fire Protection and Fire Equipment, the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hosing size requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

Title 13, Division 2

Division 2 of Title 13 of the CCR governs the operations of California Highway Patrol.

LOCAL

General Plans

Local planning policies related to public services are established in each jurisdiction's general plan. In general, jurisdictions have policies in place stating that public services must be provided at the same time as (or in advance of) the need for that service. In addition, jurisdictions may have more specific policies tailored to performance objectives, such as those outlined below.

Policies and strategies for police protection services often include language pertaining to the development of law enforcement programs to reduce and control crime, the planning of future law enforcement facilities in concurrence with population growth, and the prevention of crime through education. Many jurisdictions also have specific goals, such as maintaining a certain ratio of sworn officers to citizens, reducing response times, and/or reducing the overall number of crimes in the community.

Policies and strategies for fire protection services and emergency response typically include goals for service provision (such as an average response time) and supporting policies to help meet those goals, such as implementing emergency signal activation or requiring sprinkler systems in new developments. Each jurisdiction's general plan policies and goals differ slightly depending on the level of need and type of services provided.

General plan policies relating to library services may involve the library level of service standards, capital facility funding, and library siting. In addition, general plans can evaluate proposed library facilities for consistency with library master plans and explore methods for financing new, expanded, or upgraded library facilities.

General plan policies relating to school services may involve coordination with local school districts or encouragement or support for school curriculum or programs to meet the needs of all populations. School districts set standards related to class size, student-teacher ratio, and state standardized test scores.

General plan policies relating to social services may include linking transportation facilities to social services or planning for social services in underserved, disproportionately low-income, and/or minority neighborhoods.

Fire District Master Plans

Many jurisdictions and fire districts in the region have adopted or are planning to adopt Fire Department or District Master Plans. A master plan addresses staffing needs, facility needs, and service goals for the service area, and serves as a guiding document for the organization and daily functions of the department. In jurisdictions without a Fire District Master Plan, the general plan typically includes policies for facility siting and level of service.

Public Library Facility Master Plans and Standards

Many public library systems have facility master plans that provide general standards and criteria for the renovation and construction of new libraries. These plans establish preferred facility sizing and footprint, as well as desirable components such as volumes and collections, meeting rooms, study areas, and computer terminals. These items are often standards driven. In public library systems without a facility master plan, the general plan may include policies for siting and level of service.

School District Master Plans

School district master plans are planning documents used to assess current school assets and needs. The documents often provide a schedule for performing maintenance on and making improvements to district facilities. The plans usually lay out a finance plan and may include demographic information and trends to help schools plan for future needs.

3.14.2 Environmental Setting

FIRE PROTECTION

Fire suppression is the responsibility of various fire departments and districts, which often employ paramedics for emergency medical services. The plan area includes 49 fire districts and 16 city fire departments, as well as several other public fire departments. There are also a number of private fire departments located in the plan area, including Aerojet Fire Services in Folsom and Sacramento.

US Forest Service

The US Forest Service is responsible for fire prevention and suppression in the Eldorado National Forest, Tahoe National Forest, and those privately owned lands within the forest boundaries.

National Indian Forestry and Wildland Fire Management Program

The National Indian Forestry and Wildland Fire Management Program is a cooperative effort of the United States Department of the Interior, Bureau of Indian Affairs, Office of the Deputy Director-Trust Services, Division of Forestry and Wildland Fire Management, Intertribal Timber Council, and individual Tribal governments on reservations that contain forest resources.

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) provides response to all wildland fires within the unincorporated, privately owned areas of the plan area. CAL FIRE is also called to assist with emergencies which require more resources than the local city and county emergency responders are able to provide. Because of CAL FIRE's size and major incident management experience, CAL FIRE is often asked to assist or take the lead in disasters, such as floods, toxic spills, earthquakes, and major urban and rural fires. Within the plan area, CAL FIRE operates

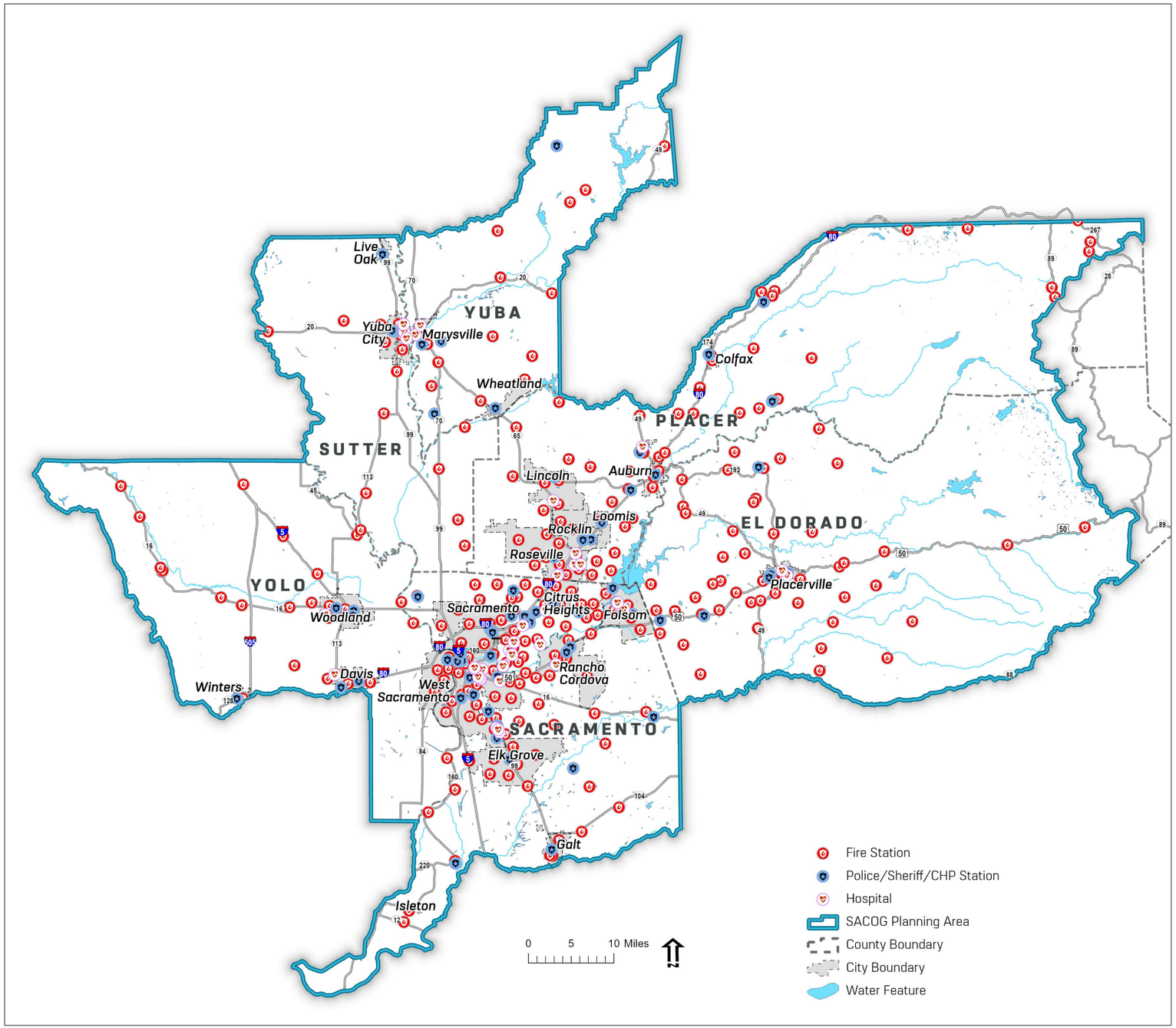
27 fire stations; 16 in Placer County, seven in El Dorado County, three in Yuba County, and one in Yolo County. El Dorado County is also home to one conservation camp jointly operated by the California Department of Corrections with crews of prison inmates that respond to wildland fires (California Department of Corrections and Rehabilitation 2024).

Local Fire Protection Services

County fire departments provide fire prevention and suppression and emergency services to the unincorporated areas of the six counties, as well as those municipalities that contract for fire protection and emergency services. City fire departments are more prevalent among older and/or larger municipalities. The varied topographic features, environmental settings, and demographics of the region require fire protection personnel to respond to various types of emergencies in rural, suburban, and urban settings. The wide diversity of emergency incidents requires firefighters to be proficient in wildland firefighting, structural firefighting, crash fire rescue, technical rescue, swift water rescue, hazardous material mitigation, and paramedic medical services. The fire protection districts in the plan area include:

- **EL Dorado County**: Cameron Park Community, Diamond Springs/El Dorado, El Dorado County, El Dorado Hills, Garden Valley, Georgetown, Lake Valley, Latrobe, Mosquito, Pioneer, Rescue, and Shingle Springs Rancheria.
- **Placer County – Unincorporated Area:** Alta (*Volunteer*), Foresthill, Newcastle, Penryn, Placer County Consolidated, Placer Hills, Sacramento Metropolitan, and South Placer; **Incorporated Area:** City of Auburn, City of Colfax (*Volunteer*), City of Lincoln, City of Rocklin, and City of Roseville.
- **Sacramento County – Unincorporated Area:** Courtland, Delta, Folsom State Prison, Herald, Natomas (*Contracted with Sacramento City*), Pacific Fruitridge, River Delta, Sacramento County Airport, Sacramento Metropolitan, Walnut Grove, and Wilton; **Incorporated area:** City of Folsom, City of Isleton, City of Sacramento, and Consumnes (*Community Services District*).
- **Sutter County – Unincorporated Area**: East Nicolaus, Pleasant Grove, Oswald-Tudor/Live Oak/Sutter, Meridian, and Robbins (Sutter Basin); **Incorporated area:** City of Yuba City.
- **Yolo County – Unincorporated Area**: Capay, Clarksburg, Dunnigan, East Davis, Elkhorn, Esparto, Knights Landing, Madison, No Man's Land, Rumsey Rancheria, Springlake, UC Davis, West Plainfield, Willow Oak, Yolo, and Zamora; **Incorporated area:** City of Davis, City of West Sacramento, City of Winters, and City of Woodland.
- **Yuba County – Unincorporated Area:** Beale Air Force Base, Campttonville (*Volunteer*), Dobbins-Oregon House, Foothill (*Volunteer*), Linda, Loma Rica-Browns Valley (*Community Services District*), Olivehurst (*Public Utility District*), and Smartsville; **Incorporated area**: City of Marysville and Wheatland.

The locations of fire stations in the plan area are shown in Figure 3.14-1.



Source: Prepared by SACOG in 2025.

Figure 3.14-1 Police Stations, Fire Stations, and Hospitals in the Plan Area

LAW ENFORCEMENT

Police protection services are provided at both the state and local level. Law enforcement services include crime investigation, crime prevention, traffic management, traffic collision investigation, homeland security activities, and emergency response.

California Highway Patrol

The California Highway Patrol (CHP) has statewide authority to conduct law enforcement activities and criminal investigations, but generally provides traffic regulation enforcement, emergency accident management and service, and assistance on state roadways and other major roadways in unincorporated portions of the region. The CHP service area is along the state route and interstate highway system that runs through the plan area. Counties may contract with CHP for services in unincorporated areas ranging from primary jurisdiction for road patrol and traffic enforcement to non-traffic law enforcement and criminal investigations. CHP also provides state police for the Capitol. CHP cooperates with both county and city police departments when the need arises, providing support to local police and helping coordinate multi-jurisdictional task force activities in serious or complicated cases.

Local Police Protection

Each of the six counties within the plan area has its own county sheriff's department, which is responsible for providing police protection within unincorporated areas. Each incorporated city and town in the plan area also either provides its own police services or contracts with the sheriff's department for the provision of such services. The Sacramento Regional Transit District, University of California-Davis, California State University-Sacramento, Los Rios Community College District, and Yuba Community College District all have their own police departments. The locations of police facilities are shown in Figure 3.14-1.

Additionally, AMTRAK and the Sacramento Regional Transit District maintain their own policing services to enforce agency policies and provide for public safety at transit stops and stations.

Tribal Police Protection

The Shingle Springs Band of Miwok Indians has a Tribal Police Department (Shingle Springs Band of Miwok Indians 2024). The United Auburn Indian Community (UAIC) has signed memorandums with Placer County and the City of Lincoln for police protection services, and the Yocha Dehe Wintun Nation is part of the Yolo Emergency Communications Agency Joint Powers Agreement for shared police services (Yolo County 2008). In addition, UAIC and the Placer County Indian Gaming Local Community Benefit Committee have awarded grants to the Placer County, Lincoln, Roseville, and Rocklin police departments to compensate for the effects of tribal gaming. The Wilton Rancheria tribe, through Memorandums of Understanding with Elk Grove and Sacramento County, funds law enforcement and related services, including police department support, anti-gambling/drug programs, and the enforcement of security measures at its entertainment facility. (City of Elk Grove 2017).

SOCIAL SERVICES

Social services are provided by government agencies, private non-profit organizations, and private for-profit organizations. The following types of social services are currently available in the plan area:

- Alcohol, Drug, and Mental Health Services: provides alcohol and drug abuse prevention and treatment services to adults and juveniles, and mental health services to seriously mentally ill adults, youth, and families.
- Adult Education and Job Training: provides educational and job training opportunities to give adult students the knowledge and skills necessary to participate effectively as citizens, employees, parents, and family members.
- Child Support Services: determines parentage, establishes orders for support and medical coverage, and collects and distributes funds from absent parents who have a financial responsibility to support their children.

- **Civic Buildings and Community Centers:** includes libraries, community centers, and other public buildings not otherwise classified.
- **Courts and Parole Offices:** hears and gives rulings on the following types of court cases: appeals, civil, criminal, family and children, juvenile, and traffic. Parole offices coordinate parole hearings and supervise defendants not yet sentenced to a term of incarceration and offenders released from incarceration.
- **Health and Disabled Services:** provides programs for the medically indigent, older adults, the disabled, and detainees; communicable disease prevention and control; protection of food and water; waste and vector control; vital records; nutrition and safety education; and public health nursing services.
- **Homeless and Housing Assistance:** provides temporary shelter, food assistance, mental health services, and transitional housing assistance to adults, juveniles, and families.
- **Human Assistance:** administers various federal, state, and local government programs designed to provide cash assistance, food stamps, and other social services not otherwise classified.
- **Veteran Affairs:** provides medical, mental health, vocational rehabilitation and employment, educational, and other training to veterans.

SCHOOLS

School districts and local jurisdictions within the plan area provide public education facilities and services, including elementary schools, middle schools, secondary schools, post-secondary schools, and colleges and universities, as well as special and adult education. School districts are responsible for planning and constructing school facilities. Standards relating to class size and funding for new school construction are set at the state level. There are approximately 740 elementary, middle, secondary, and post-secondary schools, colleges and universities, alternative education, continuation, special education, and adult school services in the region. Table 3.14-1 lists the public-school districts serving each of the six counties and the number of each type of school provided within that district. Figure 3.14-2 shows the location of public educational facilities in the plan area.

Table 3.14-1 Public Education Facilities in the Plan Area

District	K-8*	K-12**	Elementary	Intermediate/ Middle/ Junior High	High School	College	Adult	Total Schools
El Dorado County	**10**	**7**	**25**	**12**	**12**	**1**	**—**	**67**
Black Oak Mine Unified	2	—	2	—	2	—	—	**6**
Buckeye Union	3	3	5	2	—	—	—	**13**
Camino Union Elementary	2	—	—	—	—	—	—	**2**
Central Sierra Regional Occupational Program	—	—	—	—	1	—	—	**1**
El Dorado County Office of Education	—	4	—	—	2	—	—	**6**
El Dorado Union High	—	—	—	—	5	—	—	**5**
Gold Oak Union	—	—	1	1	—	—	—	**2**
Gold Trail Union	—	—	1	1	—	—	—	**2**
Indian Diggings Elementary	1	—	—	—	—	—	—	**1**
Lake Tahoe Unified	—	—	4	1	2	—	—	**7**
Latrobe	—	—	1	1	—	—	—	**2**
Los Rios Community College	—	—	—	—	—	1	—	**1**
Mother Lode Union Elementary	1	—	1	1	—	—	—	**3**
Pioneer Union Elementary	—	—	2	1	—	—	—	**3**

District	K-8*	K-12**	Elementary	Intermediate/ Middle/ Junior High	High School	College	Adult	Total Schools
Placerville Union Elementary	—	—	2	1	—	—	—	3
Pollock Pines Elementary	—	—	1	1	—	—	—	2
Rescue Union Elementary	—	—	5	2	—	—	—	7
Silver Fork Elementary	1	—	—	—	—	—	—	1
Placer County	**17**	**9**	**60**	**16**	**20**	**2**	**1**	**125**
Ackerman Charter	1	—	—	—	—	—	—	1
Alta-Dutch Flat	1	—	—	—	—	—	—	1
Auburn Union Elementary	—	—	3	1	—	—	—	4
Colfax Elementary	1	—	—	—	—	—	—	1
Dry Creek Joint Elementary	—	—	6	3	—	—	—	9
Eureka Union	—	—	5	2	—	—	—	7
Foresthill Union Elementary	1	—	1	—	—	—	—	2
Loomis Union Elementary	6	—	1	—	—	—	—	7
Newcastle Elementary	5	—	—	—	—	—	—	5
Placer County Office of Education	—	5	—	—	—	—	—	5
Placer Hills Union Elementary	—	—	2	—	—	—	—	2
Placer Union High	—	—	—	—	6	—	1	7
Rocklin Unified	1	2	11	2	3	—	—	19
Roseville City Elementary	—	—	17	4	—	—	—	21
Roseville Joint Union High	1	—	—	—	7	—	—	8
Sierra Joint Community	—	—	—	—	—	2	—	2
Tahoe-Truckee Joint Unified	—	—	6	2	2	—	—	10
Western Placer Unified	—	2	8	2	2	—	—	14
Sacramento County	**45**	**22**	**194**	**45**	**67**	**10**	**13**	**396**
Arcohe Union Elementary	1	—	—	—	—	—	—	1
California Education Authority Headquarters					4			4
California State University, Sacramento	—	—	—	—	—	1	—	1
Center Joint Unified	—	—	4	1	2	—	1	8
Elk Grove Unified	2	1	42	9	14	—	1	69
Elverta Joint Elementary	—	—	1	1	—	—	—	2
Folsom-Cordova Unified	1	1	22	4	5	—	1	34
Galt Joint Union Elementary	—	—	5	1	—	—	—	6
Galt Joint Union High	—	—	—	—	2	—	2	4
Los Rios Community College	—	—	—	—	—	9	—	9
Natomas Unified	6	1	6	3	4	—	—	20
River Delta Joint Unified	1	—	4	2	3	—	1	11
Robla Elementary	1	2	5	—	—	—	—	8
Sacramento City Unified	14	1	47	9	13	—	2	86
Sacramento County Office of Education	1	3	—	—	4	—	—	8

District	K-8*	K-12**	Elementary	Intermediate/ Middle/ Junior High	High School	College	Adult	Total Schools
San Juan Unified	12	8	35	8	8	—	3	74
Twin Rivers Unified	6	5	23	7	8	—	2	51
Sutter County	**16**	**5**	**8**	**2**	**10**	**—**	**1**	**42**
Brittan Elementary	1	—	—	—	—	—	—	1
Browns Elementary	1	—	—	—	—	—	—	1
East Nicolaus Joint Union High	—	—	—	—	1	—	—	1
Franklin Elementary	1	—	—	—	—	—	—	1
Live Oak Unified	1	—	1	1	3	—	—	6
Marcum-Illinois Union Elementary	1	1	—	—	—	—	—	2
Meridian Elementary	1	—	1	—	—	—	—	2
Nuestro Elementary	1	1	—	—	—	—	—	2
Pleasant Grove Joint Union	1	—	—	—	—	—	—	1
Sutter County Office of Education	—	1	—	—	1	—	1	3
Sutter Union High	—	—	—	—	2	—	—	2
Tri-County Regional Occupational Programs	—	—	—	—	1	—	—	1
Winship-Robbins	2	1	—	—	—	—	—	3
Yuba City Unified	6	1	6	1	2	—	—	16
Yolo County	**11**	**1**	**26**	**10**	**14**	**4**	**3**	**69**
Davis Joint Unified	—	—	10	5	4	—	1	20
Esparto Unified	—	—	1	1	2	—	—	4
Los Rios Community College	—	—	—	—	—	2	—	2
University Of California, Davis	—	—	—	—	—	1	—	1
Washington Unified	10	—	1	1	2	—	1	15
Winters Joint Unified	—	—	2	1	2	—	—	5
Woodland Joint Unified	—	—	12	2	2	—	1	17
Yolo County Office of Education	1	1	—	—	2	—	—	4
Yuba Community College	—	—	—	—	—	1	—	1
Yuba County	**3**	**4**	**18**	**5**	**8**	**1**	**2**	**41**
Camptonville Elementary	—	2	—	—	—	—	—	2
Marysville Joint Unified	2	—	13	3	4	—	—	22
Plumas Lake Elementary	—	—	2	1	—	—	—	3
Wheatland Elementary	—	—	3	1	—	—	—	4
Wheatland Union High	—	—	—	—	2	—	1	3
Yuba Community College	—	—	—	—	1	1	—	2
Yuba County Office of Education	1	2	—	—	1	—	1	5
REGION	102	48	331	90	131	18	20	740

Notes: *"K-8" category includes facilities that serve grades 1-8, 3-8, and K-7.

**"K-12" category includes facilities that serve grades 1-12, 3-12, 5-12 and 6-12.

Sources: California Department of Education, Educational Data Management Division: Public Schools and Districts Data File, 2024.

LIBRARIES

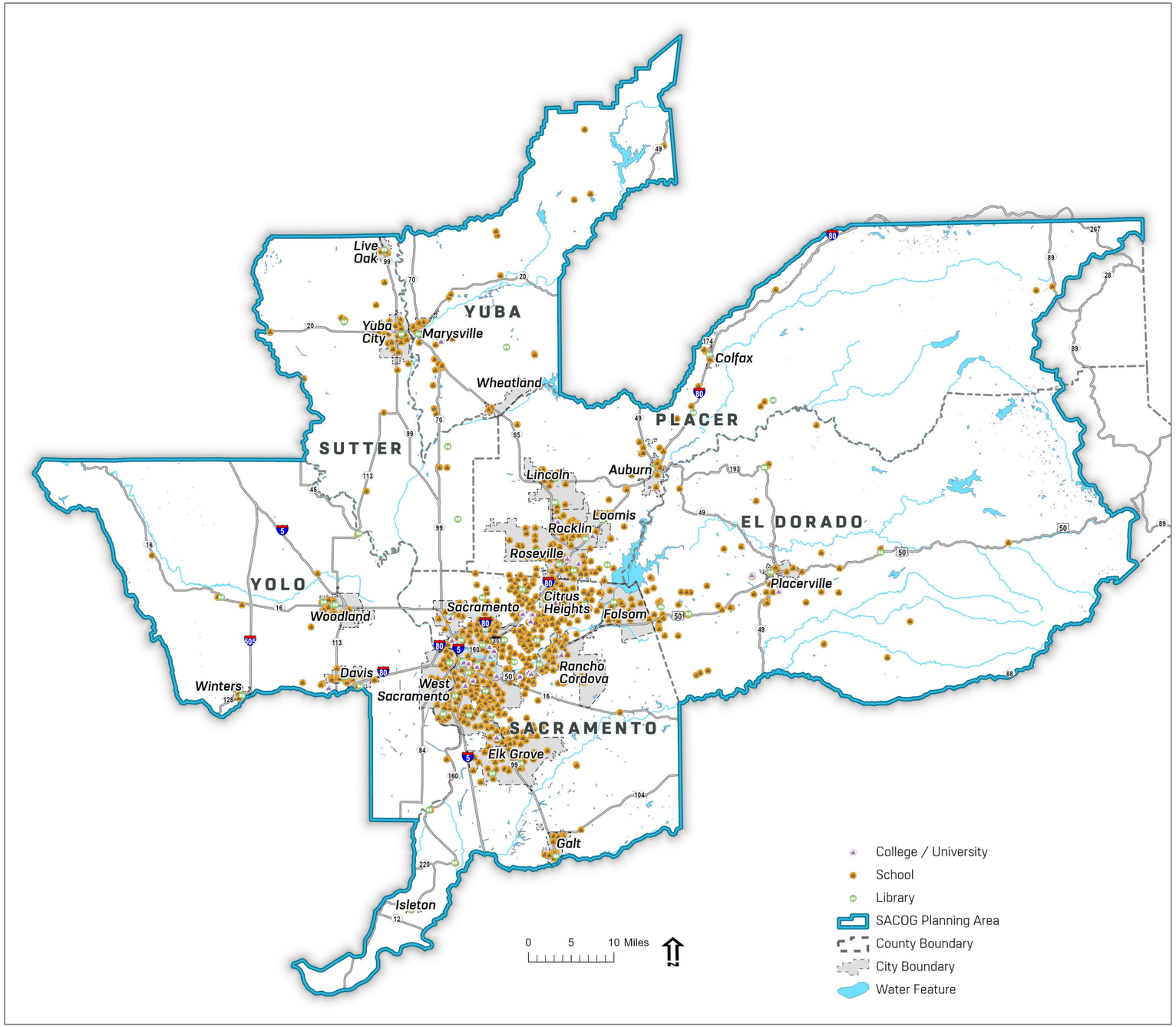
Public libraries serve communities by providing access to collections of materials that interest and benefit all ages and abilities, and reflect community needs, wants, and use. There are 64 libraries and three bookmobiles in the plan area. In addition, schools provide services for their students. There are six public libraries in El Dorado County, 16 in Placer County, 30 in Sacramento County, three in Sutter County, nine in Yolo County, and one in Yuba County. The inventory of existing library facilities in the plan area is listed in Table 3.14-2. The locations of these libraries are shown in Figure 3.14-2.

Table 3.14-2 Public Libraries in the Plan Area

County	Library
EL Dorado County	Bookmobile
	Cameron Park Branch Library
	El Dorado Hills Branch Library
	Georgetown Branch Library
	Placerville Main Library
	Pollock Pines Branch Library
Placer County	Applegate Branch Library
	Auburn Branch Library
	Bookmobile
	Colfax Branch Library
	Foresthill Branch Library
	Granite Bay Branch Library
	Kings Beach Branch Library
	Loomis Library and Community Learning Center
	Maidu Branch Library (Roseville)
	Martha Riley Community Branch Library (Roseville)
	Meadow Vista Branch Library
	Penryn Branch Library
	Rocklin Branch Library
	Roseville Downtown Public Library (Roseville)
	Tahoe City Library
	Lincoln Public Library (Lincoln)
Sacramento County	Arcade Branch Library
	Arden-Dimick Branch Library
	Belle Cooledge (Land Park) Branch Library Carmichael Branch Library
	Bookmobile
	Carmichael Branch Library
	Central Sacramento Public Library
	Colonial Heights Branch Library
	Courtland Branch (Nonie Wetzel Courtland) Library
	Del Paso Heights Branch Library
	Elk Grove Branch Library

County	Library
	Ella K. McClatchy Branch Library
	Fair Oaks Branch Library
	Folsom Branch Library (Folsom)
	Franklin Community Branch Library (Elk Grove)
	Galt-Marian O. Lawrence Branch Library
	Isleton Branch Library
	Martin Luther King, Jr. Branch Library
	McKinley Branch Library
	North Highlands-Antelope Branch Library
	North Natomas Branch Library
	North Sacramento-Hagginwood Branch Library
	Orangevale Branch Library
	Rancho Cordova Branch Library
	Rio Linda Branch Library
	Robbie Waters Pocket-Greenhaven Branch Library
	South Natomas Branch Library
	Southgate Branch Library
	Sylvan Oaks Branch Library (Citrus Heights)
	Valley Hi-North Laguna Branch Library
	Walnut Grove Branch Library
Sutter County	Main Public Library (Yuba City)
	Barber Branch Library (Live Oak)
	Sutter Branch Library
Yolo County	Arthur F. Turner Branch Library (West Sacramento)
	Clarksburg Branch Library
	Mary L. Stephens - Davis Branch Library
	Esparto Regional Branch Library
	Knights Landing Branch Library
	South Davis Montgomery Library
	Winters Branch Library
	Yolo Branch Library
	Woodland Public Library (Woodland)
Yuba County	Yuba County Library (Marysville)

Sources: El Dorado County Public Library 2024; Folsom Public Library 2024; Lincoln Public Library, City of Lincoln 2024; Loomis Library and Community Learning Center 2024; Placer County Library 2024; Library Department, City of Roseville 2024; Sacramento Public Library 2024; Sutter County Library Services 2024; Yolo County Library 2024; Library Department, Yuba County 2024.



Source: Prepared by SACOG in 2025.

Figure 3.14-2 Schools, Universities, and Libraries in the Plan Area

3.14.3 Environmental Analysis

METHODOLOGY

This program-level analysis generally evaluates potential adverse physical impacts that could result in the need for new or altered public facilities and decreased levels of service for public services based on the projected land use pattern and planned transportation network relative to the known existing public services within the plan area.

The 2025 Blueprint does not include standards for public service provision. Public service standards, performance measures, and related policies are usually set in city and county general plans or service-specific master plans, as discussed in Section 3.14.1, "Regulatory Setting." Police protection, fire protection, and emergency response levels of service are generally evaluated based on travel duration by the public agency to homes and businesses, with performance measured by personnel ratios and response times to calls for service. The level of service of schools, libraries, and social services are generally evaluated based on their accessibility for residents traveling from their homes or places of work to the facility itself, with performance measured by facility capacity and transportation access. The following public service standards, performance measures, and related policies are generally used to evaluate the adequacy of levels of service for public services.

- Police Protection, Fire Protection, and Emergency Response: Level of service standards for emergency services usually take the form of average response times to calls for service or personnel ratios per 1,000 residents.
- Schools: School standards relating to class size are predominately set at the state level, with school districts also planning for school facilities. Funding for new school construction is provided through state and local revenue sources in the form of development fees. Pursuant to state law (Chapter 407, Statutes of 1998, described in the Regulatory Setting above under the Leroy F. Greene School Facilities Act of 1998), project payment of applicable school fees fully mitigates impacts to schools.
- Libraries: Library facilities typically use a service standard of facility feet or acres per capita or per 1,000 residents.
- Social Services: Performance measures for these services are more subjective and service standards vary depending on the type of services offered and the jurisdiction where services are being provided.

A more detailed discussion on the impact of the 2025 Blueprint to parks and recreation is included in Section 3.15, "Recreation."

Impacts related to fire protection, police protection, emergency services, schools, libraries, and social services are qualitatively evaluated to determine whether the 2025 Blueprint would increase demand for these public utilities to the degree that acceptable levels of service could not be maintained or that construction of new or expanded facilities would be required to maintain adequate service levels. The analysis considers the role of existing regulations in addressing impacts on public services and evaluates the effects of forecasted regional growth, the projected land use pattern, and planned transportation network improvements of the 2025 Blueprint.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the project would result in a significant impact related to public services if it would:

- result in substantial adverse physical environmental impacts associated with the provision of new or physically altered governmental facilities, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, libraries, social services, and/or other public services.

ISSUES NOT DISCUSSED FURTHER

All of the topics identified in the significance criteria above are addressed in the following analysis. The potential for the 2025 Blueprint to result in adverse physical environmental impacts associated with the provision of new or physically recreation facilities are addressed in Section 3.15, "Recreation."

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.14-1: Result in Substantial Adverse Physical Environmental Impacts Associated with the Provision of New or Physically Altered Governmental Facilities in order to Maintain Acceptable Service Ratios, Response Times or Other Performance Objectives for Fire Protection, Police Protection, Schools, Libraries, Social Services, and/or Other Public Services

Regional Growth and Land Use Change

The Regional Growth Projection identified in the 2025 Blueprint would increase demand for public services including police protection, fire protection, emergency response, school, library, and social services. Increases in demand for public services would correlate with the location of development identified in the projected land use pattern of the 2025 Blueprint. In some cases, particularly in locations where higher density, compact development is projected, implementation of the 2025 Blueprint could require additional capital, capacity, programming, equipment, or personnel to ensure acceptable levels of service to respond to increased demand for public services. Jurisdictions that maintain goals, standards, and policies related to the provision of public services have the authority to determine how these standards are applied. Local jurisdictions have generally accommodated increases in public service demand by first leveraging existing facilities, equipment, and personnel before constructing new facilities. It is ultimately local jurisdictions that have the authority over land use, including the development and implementation of level of service standards and determination of the siting and timing of public service projects.

The 2025 Blueprint identifies the general location of uses, residential densities, and building intensities within the region. The adopted and proposed land use plans from cities and counties in the plan area helped to determine where housing and employment growth is likely to occur and assumes increases in public services facilities and infrastructure as the population increases. Therefore, the Development Pattern of the 2025 Blueprint includes the land supply needed to accommodate necessary increases in public services facilities, including those for police protection, fire protection, emergency services, schools, libraries, social services, and other public facilities.

By promoting compact development in Center and Corridor Communities and Existing Communities, the 2025 Blueprint directs more growth to areas that are within the boundaries of established services. Although this pattern of growth results in the potential to leverage existing facilities and personnel, because the total number of residents served would increase, public service providers would have to respond to more service requests, which could affect response times and reduce levels of services. In order to increase the service capacity to adequately serve the growing population, new or expanded facilities may be required in Center and Corridor Communities and Established Communities.

Projects with potential to increase demand for services in Developing Communities would be conditioned on demonstration of adequate public services. This may require the expansion of service boundaries, the dedication of land for the construction of new facilities and the development of interim service plans. Many jurisdictions also require developers to pay fees to help provide certain public services to serve increased demand generated by a proposed project.

Construction of new or expanded public service facilities to maintain adequate service levels could result in physical impacts on the environment during both the construction process and the conversion of undeveloped land to accommodate facilities. These impacts could adversely affect other resources described in this Draft EIR. Construction or expansion of any public service facilities would be subject to applicable federal, state, and local laws. Construction-related impacts are typically short-term and can often be mitigated below a level of significance through actions of the implementing agency. The addition of new or expanded public services would be located within the growth areas

identified in the 2025 Blueprint and evaluated throughout this Draft EIR. The impacts resulting from the expansion of public service facilities would not be unique from the impacts already evaluated throughout this Draft EIR.

SACOG does not attribute un-sited public service facilities to specific parcels. Instead, this land supply is included in the 2025 Blueprint in one of two ways: (1) where local plans identify specific locations and acreages for these services, they are included in the "public" and "office and commercial" development categories of the land use forecast; and (2) where local plans do not identify specific locations and acreages, they are accounted for in the gross acreages of the "residential" development category of the land use forecast. This approach to the land use forecast is used because SACOG does not have land use authority to adopt local land use plans or approve local land use projects. Ultimately, local governments make decisions about land use, including the type, level, timing, and siting of services necessary to support new development. Local governments also have the authority to ensure the timing of capital facilities for most local public services through general plan policies, regulatory standards, CEQA mitigation measures, and project conditions of approval.

Overall, the projected land use pattern of the 2025 Blueprint would result in increased demand for fire and police protection, schools, and other public services and facilities (e.g., libraries, social services). Construction of new or physically altered facilities for public services could result in short-term construction-related impacts and long-term operational impacts for such resource areas as air quality, noise, and traffic, among others. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessened by mitigation measures adopted by the implementing agency, including adherence to existing regulations and BMPs. Furthermore, because public services are sited within the communities they serve, the physical environmental effects of constructing the facilities are captured within the growth geographies evaluated throughout this Draft EIR.

Transportation Network Improvements and Programs

A variety of planned improvements are included in the 2025 Blueprint, such as new high-occupancy vehicle lanes, auxiliary lanes, roadway widening, bicycle and pedestrian infrastructure improvements, transit facilities, increased transit service, and roadway maintenance and rehabilitation projects. Although these improvements may include facilities (e.g., trails, bathrooms, stations) that require support from public services like police and fire, transportation projects generally do not result in substantial increases in demand for public services because there would not be a corresponding increase in service population. Transportation projects can, however, influence residents' access to public services. Use of some services (e.g., libraries) may fluctuate in response to alternative transportation options and accessibility. Where providers are required to respond to calls for service (e.g., fire, police), roadway congestion can lead to longer response times.

For construction of these improvements, any necessary road closures and detours that could cause delays in providing police and fire protection services are typically addressed in a Traffic Control Plan or Transportation Management Plan to allow emergency service access and alternative routes. Planned transportation improvements that increase capacity (e.g., road widenings, newly constructed roads, and high-occupancy vehicle lanes) have the potential to increase access to schools, libraries, and social services, as well as improve response times for emergency service providers. This is especially true for congested areas where such projects would alleviate bottlenecks and reduce travel times. Similarly, implementation of the region's transit projects would increase access to public service facilities by increasing the frequency of transit service and expanding the service area to include new public service facilities. The same is true for pedestrian and bicycle improvements, such as Safe Routes to School projects that construct additional facilities near schools and thereby increase non-motorized access for schoolchildren.

Implementing the 2025 Blueprint's proposed transportation network improvements, along with a focus on placing new housing and employment developments in closer proximity to one another, would facilitate more efficient access for emergency service providers by reducing travel times and locating emergency services closer to residents and businesses. As such, the planned transportation improvements in the 2025 Blueprint would generally have beneficial effects for public services access and response times.

Summary

Because the population is forecasted to increase under the 2025 Blueprint, it is possible that implementation of the 2025 Blueprint would result in increased demand for public services that would require additional or expanded facilities to maintain acceptable service levels. During project planning, design, and project-level environmental review, implementing agencies would ensure that adequate public services would be available to maintain acceptable service levels. This would be documented prior to project approval in the form of a capacity analysis, provider will-serve letter, or equivalent documentation. Although implementation of the 2025 Blueprint would improve regional transportation, police, fire, and other emergency response times could be longer in 2050 as compared to baseline conditions. This could lead to the need for new or expanded public services, which may have a physical impact on the environment. Although these facilities would generally be located within the areas of growth evaluated in this plan (because they are located near the populations they serve) local jurisdictions would site facilities in coordination with the service providers based on multiple factors (including land availability, service area, and the condition of existing facilities). Therefore, new or expanded facilities may be located outside of areas identified for development in this plan. The impact of the implementation of the 2025 Blueprint would be **potentially significant**.

Mitigation Measures

SACOG does not have the authority to require the implementing agencies to adopt the identified mitigation measure; the mitigation measure is within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measure or other comparable measures identified by the lead agency at a project level would reduce the impacts related to provision of adequate public services, and agencies with jurisdiction to adopt these measures should do so (PRC Section 21081).

Mitigation Measure 3.14-1: Require Provision of Adequate Public Services

During project planning, design, and project-level environmental review, implementing agencies shall ensure that adequate public services are available. This shall be documented prior to project approval in the form of a capacity analysis approved by the various applicable districts.

Significance after Mitigation

As described above, the forecast of growth in population, employment, and households that is anticipated in the SACOG region through 2050 would result in increased demand for public services. These services would generally be provided by existing or expanded facilities in Center and Corridor Communities and Existing Communities and new facilities included as part of the master plans for Developing Communities. It is assumed that the majority of the new facilities would occur in areas where the environmental impacts of growth have been evaluated in this Draft EIR.

However, because there are many factors considered in the location of new facilities and SACOG does not have land use authority to influence decisions about facility siting, some facilities could be located outside of the regional growth pattern that has been evaluated. SACOG has no indication of where such development would occur; however, in these cases, implementation of Mitigation Measure 3.14-1 could result in additional effects on the environment due to the construction of these facilities. This may include the impacts of ground disturbance to air quality, hazardous materials, and cultural resources during construction as well as aesthetic and transportation impacts during operation.

Mitigation Measure 3.14-1 would ensure adequate provision of public services. However, this mitigation does not address the potential for the facilities required to ensure adequate public services to result in substantial adverse physical environmental impacts. Additionally, SACOG cannot require the implementing agency to adopt this mitigation measure. It is ultimately the responsibility of the implementing agency to determine appropriate service levels and adopt project-specific mitigation, as applicable. Therefore, this impact would be **significant and unavoidable** for purposes of this program-level review.

3.15 RECREATION

This section describes the existing conditions (environmental and regulatory) and evaluates the potential parks and recreational resource impacts from the 2025 Blueprint. Where necessary and feasible, mitigation measures are identified to reduce these impacts. Section 3.14, "Public Services," evaluates potential impacts to other public services in the plan area. No comments related to parks and recreational resources were received in response to the notice of preparation.

3.15.1 Regulatory Setting

FEDERAL

Land And Water Conservation Fund Act Of 1965

Section 6(f)(3) of the Land and Water Conservation Fund Act (LWCF Act) (16 U.S. Code Section 460l et seq.) contains provisions to protect federal investments in park and recreation resources and the quality of those resources assisted by federal investment. The law recognizes that changes in land use or development may impact park use, making some areas purchased with LWCF Act funds obsolete over time—particularly in rapidly changing urban areas. It provides for conversion to other uses under certain conditions.

No property acquired or developed with assistance under Section 6(f)(3) shall, without the approval of the US Secretary of the Department of the Interior, be converted to a use other than public outdoor recreation uses. The Secretary shall approve such conversion only if they find it to be in accord with the most current comprehensive statewide outdoor recreation plan and only upon such conditions as they deem necessary to assure the substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location.

This requirement applies to all parks and other sites that have been the subject of LWCF Act grants of any type and includes acquisition of parkland and development or rehabilitation of park facilities. If a transportation project would have an adverse effect on a park or site that has received LWCF Act funds, the requirements of Section 6(f)(3) would apply.

US Department of Transportation Act of 1966, Section 4(f)

Section 4(f) of the US Department of Transportation Act (DOT Act) (49 U.S. Code Section 303) was enacted to preserve the natural beauty of countryside, public park, and recreation lands, wildlife and waterfowl refuges, and historic sites. Section 4(f) requires a comprehensive evaluation of all environmental impacts resulting from federal-aid transportation projects administered by the Federal Highway Administration, Federal Transit Administration, and Federal Aviation Administration.

This evaluation, called the Section 4(f) statement, must be sufficiently detailed to permit the US Secretary of Transportation to determine that:

- there is no feasible and prudent alternative to the use of such land;
- the program includes all possible planning to minimize harm to any park, recreation area, wildlife and waterfowl refuge, or historic site that would result from the use of such lands; or
- if there is a feasible and prudent alternative, a proposed project using Section 4(f) lands cannot be approved by the Secretary of Transportation; or if there is no feasible and prudent alternative, the proposed project must include all possible planning to minimize harm to the affected lands.

Detailed inventories of the locations and likely impacts on resources that fall into the Section 4(f) category are required in project-level environmental assessments.

In August 2005, Section 4(f) was amended to simplify the process for approval of projects that have only minimal impacts on lands affected by Section 4(f). Under the new provisions, the US Secretary of Transportation may find such a minimal impact if consultation with the State Historic Preservation Officer results in a determination that a transportation project will have no adverse effect on the historic site or that there will be no historic properties affected by the proposed action. In this instance, analysis of avoidance alternatives is not required, and the Section 4(f) evaluation process is complete.

STATE

State Public Park Preservation Act Of 1971

The primary instrument for protecting and preserving parkland is the State Public Park Preservation Act (PRC Sections 5400–5409). Under the act, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

The Quimby Act Of 1975

The Quimby Act (Government Code Section 66477) states that "the legislative body of a city or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreation purposes as a condition to the approval of a tentative or parcel map." The Quimby Act only applies to the acquisition of new parkland and does not apply to the physical development of new park facilities or associated operations and maintenance costs. The Quimby Act preserves open space needed to develop parkland and recreation facilities. The actual development of parks and other recreation facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development.

Delta Protection Commission

Land Use and Resource Management Plan

The Delta Protection Commission (DPC) adopted the first Land Use and Resource Management Plan (LURMP) for the Sacramento-San Joaquin Delta on February 23, 1995 and updated the plan on February 25, 2010. The LURMP guides the conservation and enhancement of natural resources in the Delta, while sustaining agriculture and meeting increased recreation demand. It defines a Primary Zone, which comprises the principal jurisdiction of DPC, and a Secondary Zone outside the Primary Zone and jurisdiction of DPC, but within the legal Delta area. Both Primary and Secondary Delta Zones overlay the southern end of the plan area within Yolo and Sacramento counties.

Refer to Section 3.10, "Land Use and Planning," for a map and further discussion of DPC regulations in the plan area. Most of the land in this area is privately-owned, with recreation facilities provided through private marinas, reducing the availability of land-based recreation (DPC 2010).

The LURMP identifies concerns regarding existing and future recreation activities within the Delta, including:

- compatibility with agricultural operations and other private property uses,
- funding availability for the long-term maintenance and supervision of existing recreation facilities,
- funding availability for the development of new recreation facilities,
- compatibility with wildlife uses and levee maintenance requirements,
- overuse of existing facilities and popular waterways,
- abandonment of vessels and other debris within Delta waterways, and
- increased demands on law enforcement and other emergency response providers.

The LURMP also identifies opportunities for new recreation facilities on publicly owned land. Some potential opportunities include pedestrian access on publicly owned levees adjacent to the Brannan Island State Recreation

Area; construction of new visitor facilities, interpretive facilities, and trails at the Stone Lake National Wildlife Refuge; and new pedestrian trails, visitor facilities, and water access facilities at Delta Meadows.

Great California Delta Trail Plan

In 2006, Senate Bill 1556 (PRC Section 5852 et seq.; Public Utilities Code Section 99234) required that DPC adopt a plan and implementation program for a continuous recreation corridor trail network linking the San Francisco Bay Trail system to the planned Sacramento River trails in Yolo and Sacramento counties. The Great California Delta Trail Plan, published in 2022, proposes creating a main continuous corridor from the San Francisco Bay Trail at the Carquinez Bridge to the Sacramento River Parkway Trail at the Jibboom Street Bridge with local access trails connecting to the main corridor (DPC 2022). Under the statute, the DPC works in partnership with local entities to coordinate planning and implementation. Trail segments are conceived, developed, built, and managed locally. There are currently five designated Great California Delta Trail segments, including the West Sacramento River Walk, the Sacramento River Parkway, the Clarksburg Branch Line Trail, the Big Break and Marsh Creek Trail, and the Carquinez Strait Loop Trail (DPC 2025). Of the designated trail segments above, the West Sacramento River Walk, the Sacramento River Parkway, and the Clarksburg Branch Line Trail are located within the plan area.

LOCAL

General Plans

Local planning policies related to recreation are established in each jurisdiction's general plan. In general, jurisdictions have policies in place stating that public services must be provided at the same time as (or in advance of) the need for that service. In addition to these general policies, jurisdictions may have more specific policies tailored to performance objectives.

Policies and strategies for parks and recreation may include standards for park acreage and requirements for the provision of parks in new residential developments. They also contain policies to develop self-supporting recreation programs and pursue joint use of school sites; utility rights-of-way; trail development, maintenance and integration; and other public lands for park, recreation, and open space purposes.

Bicycle, Pedestrian, And Trails Master Plans

Bicycle, pedestrian, and trails master plans are planning documents used to guide future development of a jurisdictions' bicycle and pedestrian facilities. These plans usually promote Class I bike paths that feature completely separate right of way for exclusive use by bicyclists and pedestrians. At a minimum, these plans usually contain an inventory of existing facilities, a discussion of the plan's goals, and an implementation plan. General plans typically include policies for bicycle and pedestrian infrastructure for jurisdictions without a Bicycle, Pedestrian, and Trails Master Plan.

Parks and Recreation Master Plans

Parks and recreation master plans outline parks and recreation needs, including those highlighted in the 2025 Blueprint, and identified strategies for fulfilling those needs. The main purpose of parks and recreation master plans is to provide guidance for addressing preservation, use, development, and administration of recreation facilities. These policy and action documents ensure the preservation of the natural environment, while providing developments to facilitate human enjoyment of the parks and recreation areas. Plans can target goals and future actions for a specific park or be generalized to a collection of parks in a larger system. In jurisdictions without a parks and recreation master plan, the general plan typically includes policies for facility siting and level of service.

Parks and recreation levels of service are generally evaluated based on their accessibility for residents traveling from their homes or places of work to the facility itself, with performance measured by facility capacity and transportation access. Parks and recreation facilities typically use a service standard of acres per capita or per 1,000 residents. The parks and recreation standards for counties in the SACOG region are: 0.005 acres per capita in El Dorado County, 0.01 acres per capita in Placer County, 0.02 acres per capita in Sacramento County, 0.01 acres per capita in Sutter County, 0.02 acres per capita in Yolo County, and 0.005 acres per capita in Yuba County.

3.15.2 Environmental Setting

The plan area includes a wide variety of recreation types, including biking, hiking, dog walking, cross-country skiing, fishing, kayaking, paddle boarding, tubing, wading, and swimming (among many others). Specific parks and other recreational facilities in the plan area are described in detail below.

PARKS

National Parks

US Forest Service (USFS) manages two national forests in the plan area: the Eldorado National Forest (El Dorado and Placer counties) and the Tahoe National Forest (Placer and Yuba counties). The forests provide diverse recreation opportunities including: camping, fishing, water sports (e.g., rafting, canoeing, kayaking), motorized use trails (on designated trails and roads), non-motorized use trails (e.g., hiking, cycling, equestrian), rental cabins, shooting (e.g., plinking and target shooting), winter sports (e.g., cross-country skiing, downhill skiing, snowboarding, snowshoeing), and snowmobiling. There are three wilderness areas within these two National Forests: Granite Chief Wilderness (Tahoe National Forest), Desolation Wilderness (Eldorado National Forest), and Mokelumne Wilderness (Eldorado National Forest). However, all three of these wilderness areas are outside of the plan area. In 2015, over 330,000 acres of Berryessa Snow Mountain became a national monument. A portion of this area is located within Yolo County.

While there are no national parks within the plan area, there are other federally managed open space and conservation areas located within the region. The US Bureau of Land Management (BLM) manages several areas of special and critical environmental concern within the region, including Cronan Ranch, Greenwood, Kanaka Valley, Norton Ravine, and Pine Hill Preserve in El Dorado County; Cosumnes River Preserve in the Sacramento Delta; and the South Yuba Wild and Scenic River Recreation Area in Yuba County. The US Fish and Wildlife Service manages the Sutter National Wildlife Refuge near Yuba City and the Stone Lakes National Wildlife Refuge in Sacramento County (in partnership with DPR). The US Bureau of Reclamation operates the Putah Creek Fishing Site in Yolo County and the Folsom S. Canal in Sacramento County and the US Army Corps of Engineers manages Harry L. Englebright Lake in Yuba County. Figure 3.15-1 shows existing land in the plan area designated as federal forest land.

State Parks, Recreation Areas, Historic Parks, Park Properties, and Points of Interest

DPR currently manages 283 parks in the state, providing for the health and education of the people of California by helping to preserve the state's biological diversity, protect its most valued natural and cultural resources, and create opportunities for high-quality outdoor recreation. Of these parks, the DPR manages 29 state parks within the SACOG region: seven in El Dorado County, five in Placer County, 15 in Sacramento County, one in Sutter County, and one in Yolo County. There are no designated state parks within Yuba County. Figure 3.15-1 shows existing land in the plan area designated as parks and open space (DPR 2024).

Table 3.15-1 includes current state parks, recreation areas, historic sites, properties, and points of interest within the plan area.

Table 3.15-1 State Parks, Recreation Areas, Park Properties, and Points of Interest within the Plan Area

Park Name	Type of Park	Description
El Dorado County		
Auburn State Recreation Area	State Recreation Area	In the heart of the gold country, the Auburn State Recreation Area covers 40-miles of the North and Middle Forks of the American river. Once teeming with thousands of gold miners, the area is now a natural area offering a wide variety of recreation opportunities to over 900,000 visitors a year. Major recreation uses include hiking, swimming, boating, fishing, camping, mountain biking, gold panning, equestrian/horseback riding trails, and off-highway motorcycle riding.

Park Name	Type of Park	Description
Folsom Lake State Recreation Area	State Recreation Area	Located at the base of the Sierra foothills, the lake and recreation area offer opportunities for hiking, biking, running, camping, picnicking, horseback riding, water-skiing and boating. The park also includes Lake Natoma, downstream from Folsom Lake, which is popular for crew races, sailing, kayaking and other aquatic sports.
Marshall Gold Discovery State Historic Park	State Historic Park	The Marshall Gold Discovery State Historic Park secures and makes the gold discovery site available for public observation, inspiration, and enjoyment. The park provides activities demonstrating an accurate portrayal of the story that unfolded at the time of the discovery and Gold Rush.
Placer County		
Auburn State Recreation Area	State Recreation Area	Refer to description for El Dorado County.
Folsom Lake State Recreation Area	State Recreation Area	Refer to description for El Dorado County.
Sacramento County		
California Indian Heritage Center	Park Property	The California Indian Heritage Center (CIHC) honors the diversity and history of California Indian people by preserving cultural and tribal traditions, nurturing contemporary expressions, and facilitating research and education. The CIHC will be a distinctive and honorable place where past, present and future experiences and achievements of California Indians are recognized, celebrated and shared. The CIHC will replace the California State Indian Museum when construction is completed. In June 2019, the City of West Sacramento transferred a 43-acre parcel to California State Parks that will eventually become the site for the CIHC. Proposed buildout is anticipated to begin in 2028 with completion in 2032.
California State Capitol	Park Property	At the California State Capitol, visitors can tour the restored historic offices of the Secretary of State, Treasurer, and Governor of the State of California. Surrounding the Capitol is Capitol Park, which includes a Civil War Memorial Grove, a life-sized statue of Father Junípero Serra, the California Vietnam Veterans Memorial, the California Veterans Memorial, and various gardens and trees.
California State Railroad Museum	Point of Interest	The California State Railroad Museum houses more than 20 restored locomotives and railroad cars, some dating back to 1862, along with thousands of smaller artifacts and a variety of exhibits.
Delta Meadows	Park Property	The Delta Meadows Park Property is closed. The restroom facilities have been removed, and no services are provided.
Folsom Lake State Recreation Area	State Recreation Area	Refer to description for El Dorado County.
Folsom Powerhouse	State Historic Park	Once called "the greatest operative electrical plant on the American continent," the Folsom Powerhouse produced electricity for Sacramento residents from 1885 to 1952. Visitors touring the powerhouse can see the massive General Electric transformers, each capable of conducting from 800 to 11,000 volts of electricity, in addition to the forebays and canal system that brought water from the dam.
Governor's Mansion	State Historic Park	California's executive mansion, popularly known as the Governor's Mansion, was built in 1877 for Albert and Clemenza Gallatin. The State of California purchased the house from Joseph and Louisa Steffens to use as a home for California's first families in 1903. The Governor's Mansion is closed to the public.
Leland Stanford Mansion	State Historic Park	Originally built in 1856 by Gold Rush merchant Sheldon Fogus, the Leland Stanford Mansion was later purchased and remodeled by Leland and Jane Stanford. Leland Stanford served as Governor of California from 1862-1863. The Mansion served as the office of three governors during the 1860's: Leland Stanford, Fredrick Low, and Henry Haight. The Mansion is now open to the public as a museum. It also serves the citizens of California as the state's official reception center for leaders from around the world.

Park Name	Type of Park	Description
Locke Boarding House	Point of Interest	Once known as the Jack Ross Boardinghouse, the Locke Boarding House was constructed in 1909, prior to the formal development of the town of Locke. Chinese men working on the construction of the Southern Pacific Railroad boarded in the small establishment which was located near the Southern Pacific Railroad shipping warehouse. The Kuramoto family operated the boarding house from 1921 until they were interned during World War II in 1942. The family did not return to resume operation of the Boarding House after the war. In 2008, it became the Locke Boarding House, a unit of the state park system. Today, the boarding house is operated in partnership with the Locke Foundation as a museum that provides visitors with a glimpse into the past. The entire town of Locke is a historical site, but it is also a living community with year-round residents.
Old Sacramento	State Historic Park	Old Sacramento State Historic Park is a cluster of noteworthy, early Gold Rush commercial structures. Historic buildings include the 1849 Eagle Theater, the 1853 B. F. Hastings Building (once home to the California Supreme Court), and the 1855 Big Four Building. Old Sacramento's historical significance comes from it being the western terminus of the Pony Express postal system, the first transcontinental railroad, and the transcontinental telegraph. Old Sacramento is a California Historical Landmark. The National Park Service named the entire original historic 1850s business district of Old Sacramento a National Historic Landmark in 1965. With over 50 historic buildings, Old Sacramento has more buildings of historic value in its 296 acres than any area of similar size in the West.
Prairie City	State Vehicular Recreation Area	Prairie City park is at the base of the Sierra Nevada. The park has flat, open grasslands, rolling hills with native blue oak trees, and acres of cobbled mine tailings. The area provides off-highway vehicle (OHV) facilities, including open space and trails for motorcycles, all-terrain vehicles, and four-wheel drive vehicles.
State Indian Museum	State Historic Park	The California State Indian Museum displays exhibits illustrating the cultures of the state's first inhabitants. California's prehistoric population, one of the largest and most diverse in the Western hemisphere, was made up of over 150 distinct tribal groups who spoke at least 64 different languages. California Native American cultural items in the museum include basketry, beadwork, clothing and exhibits about the ongoing traditions of various tribes. There is also an exhibit depicting the life of Ishi, reputedly the last survivor of the Yahi tribe, illustrating how Native culture was powerfully impacted and forever changed when outsiders arrived.
Stone Lake	Park Property	The purpose of the Stone Lake property, in Sacramento County, is to preserve and protect two rare natural Central Valley lakes and their surrounding riparian habitat and grassland areas. The property lies within the Pacific Flyway and provides wintering grounds for a variety of waterfowl and other migratory birds, as well as habitat for indigenous species such as the listed Swainsons hawk, the giant garter snake and the longhorn elderberry beetle. The property contains a number of Native American occupancy sites. Located on the southern edge of the Sacramento metropolitan area, the property serves as valuable urban open space.
Sutter's Fort	State Historic Park	Sutter's Fort was built by Swiss immigrant John Sutter more than 150 years ago. Less than a decade after they were established, Sutter's properties were overrun by gold seekers and the fort is all that remains of New Helvetia. It has been restored to its former state based on an 1847 map published in Darmstadt, Germany and is open for tours.
Brannan Island	State Recreation Area	Brannan Island State Recreation Area is a maze of waterways through the Sacramento-San Joaquin Delta. This park has countless islands and marshes with many wildlife habitats and many opportunities for recreation, including boating and swimming.
Sutter County		
Sutter Buttes State Park	State Park	In 2003, California State Parks acquired property on the north side of the Sutter Buttes, which represents a unique resource within the State Park System. There is currently no public access point to enter this park. This park has not been officially named.
Yolo County		
Woodland Opera House	State Historic Park	Built in 1885, the original Woodland Opera House burned down in 1892. It was rebuilt on the same site, using some of the remaining foundations and bricks from the walls, reopening in 1896.

Source: DPR 2024.

Local Parks

There are many different types of local and regional park and recreation facilities provided throughout the plan area. This Draft EIR uses the following classifications to distinguish between the subgroups:

- **Neighborhood Park:** A park or playground developed primarily to serve the recreation needs of citizens living within a 0.5-mile radius of the park. Neighborhood parks include pocket parks and neighborhood playgrounds.
- **Community Park**: A larger park or facility developed to meet the park and recreation needs of those living or working within a 3-mile radius. Community parks may have a variety of playing fields and community recreation facilities.
- **City or Regional Park:** A park or facility that is larger than a community park and meets the recreation needs of the entire city and a portion of the larger region. City or regional parks include destination attractions and are often located near public transit.
- **Specialized Recreation Area**: A park or facility that includes sports fields or courts, beach amenities, or other designated natural areas. These facilities may also include stand-alone parks designed to serve a particular use, such as a golf course or a marina. A specialized recreation area meets the active recreation needs of the entire city and a portion of the larger region.
- **State or Federal Recreation Area:** A park designated and managed by either the California Department of Parks and Recreation (DPR) or National Park Service (NPS). State and federal recreation areas serve the larger state and national population and preserve large scenic areas and natural habitats.
- **Open Space Area:** An area that provides for passive, low-impact recreation use by city and regional residents. These areas also protect wildlife and habitat, establish community separators, and preserve scenic vistas. Open space areas are generally larger in size, ranging from the size of a community park to a national park.
- **Trail and corridors:** These are the linear features that connect other parkland and open space areas. Recreation trails or linear parkways may be located within a park or connect a series of parks. They provide recreation opportunities and access for bicycles, pedestrians, and other users.

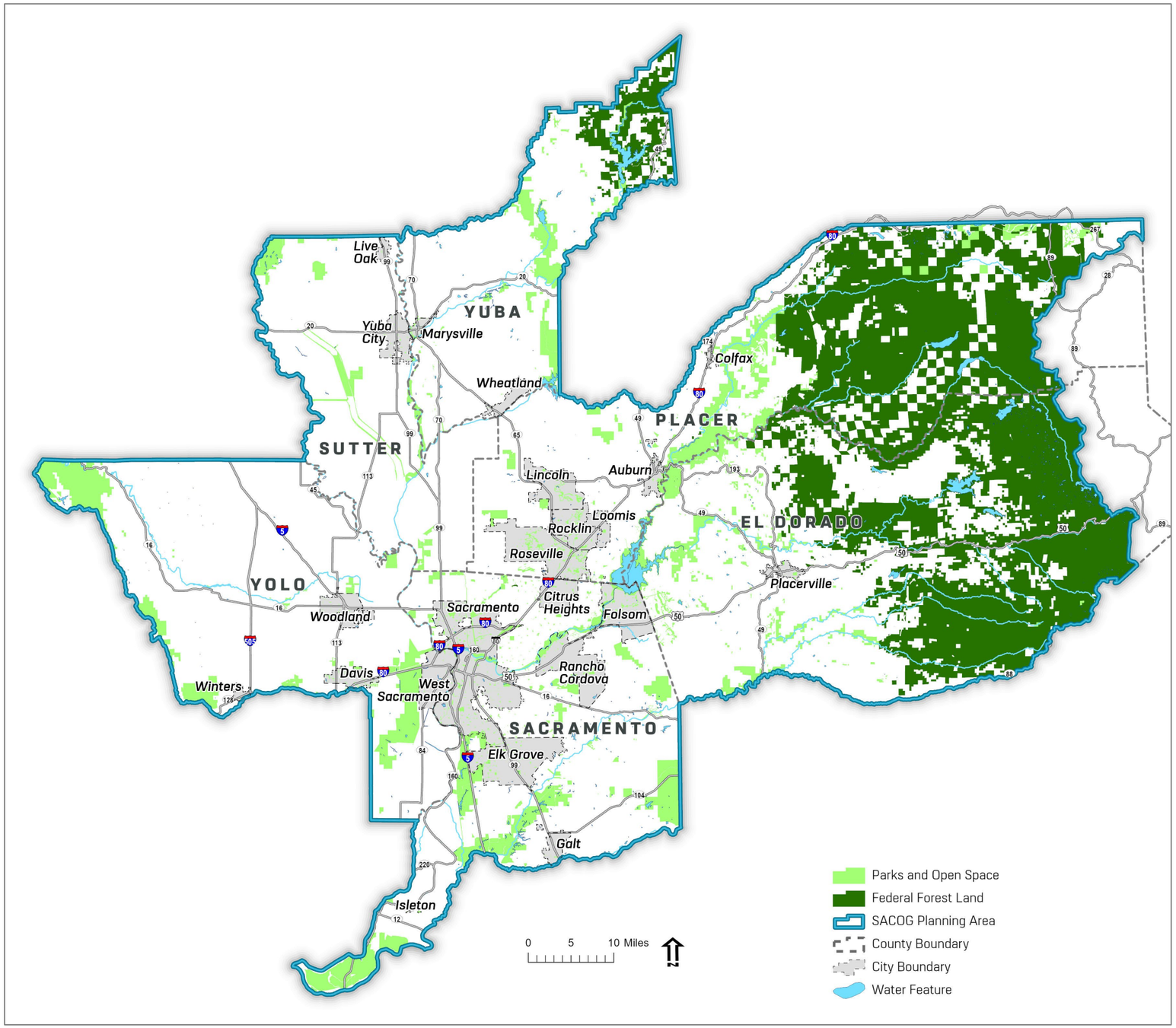
In addition to the parks and recreation facilities offered by governmental agencies, many private landowners and non-profit conservation organizations also contribute to the open space acreage in the region. Types of privately-owned open space can include private parks, private nature preserves, golf courses, campgrounds, playing fields, animal parks, off-road-vehicle parks, private arboretums, and fallow farmland.

Diverse natural resources provide a wide range of recreation opportunities for residents and tourists alike. Natural and recreation sites range from small neighborhood parks, featuring playground equipment and sports fields, to vast expanses of wilderness with hiking trails, rafting, and camping. In addition to parks providing opportunities for active recreation, the plan area also has a diverse array of open space areas. As of 2019, there are approximately 1,983,241 acres of parks, recreation, and open space lands in the plan area. These lands are governed by a variety of agencies, including dependent and independent park districts, counties, cities, community service districts, and federal and state agencies.

Some of the most popular parks in the plan area include:

- **Discovery Park** (275 acres): The park consists of activity areas including boating, fishing, group picnics, multi-use field areas, archery range and a variety of trails for horses, biking and hiking. The park is also equipped with covered group picnic shelters, horseshoes, playground equipment, and volleyball courts.
- **William Land Regional Park** (207 acres): The park is developed with amenities including a play area, amphitheater, jogging path, picnic areas, and attractions including Fairytale Town, Funder land, and the Sacramento Zoo.
- **Granite Regional Park** (80 acres): The park includes amenities such as a dog park, horseshoe pits, a skate park, soccer fields, and group picnic areas.
- **McKinley Park** (32 acres): The park includes amenities such as a basketball court, a community center, group picnic areas, tennis courts, a volleyball court, and play areas including tot lots, climbing walls, and adventure play area.

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Source: Prepared by SACOG in 2025.

Figure 3.15-1 Parks, Open Space, and Forested Land within the Plan Area

TRAILS

National Trails

NPS designates national historic and scenic trails. The National Trails System Act of 1968 made it a federal policy to provide financial assistance, volunteer support, and coordination between state and other agencies in order to recognize and promote trails. NPS has established 11 national scenic trails and 19 national historic trails. Depending on the trail, some combination of NPS, USFS, and BLM are designated as administering agencies. Portions of the Pony Express National Historic Trail and California National Historic Trail are within the plan area (NPS 2019). NPS is preparing a feasibility study under the Omnibus Public Land Management Act of 2009 to evaluate potentially adding 64 routes to existing national historic trails. A total of 41 of these proposed routes are part of the California National Historic Trail (NPS 2019). Figure 3.15-2 shows the location of national historic and scenic trails.

In addition to national historic and scenic trails, NPS designates National Recreation Trails in the plan area, including Carson Emigrant Historic in El Dorado County; Pioneer Trail in Placer County; and California Aqueduct Bikeway, Jedediah Smith (also known as the American River Parkway), South Yuba, and Western States Pioneer Trail in Sacramento County.

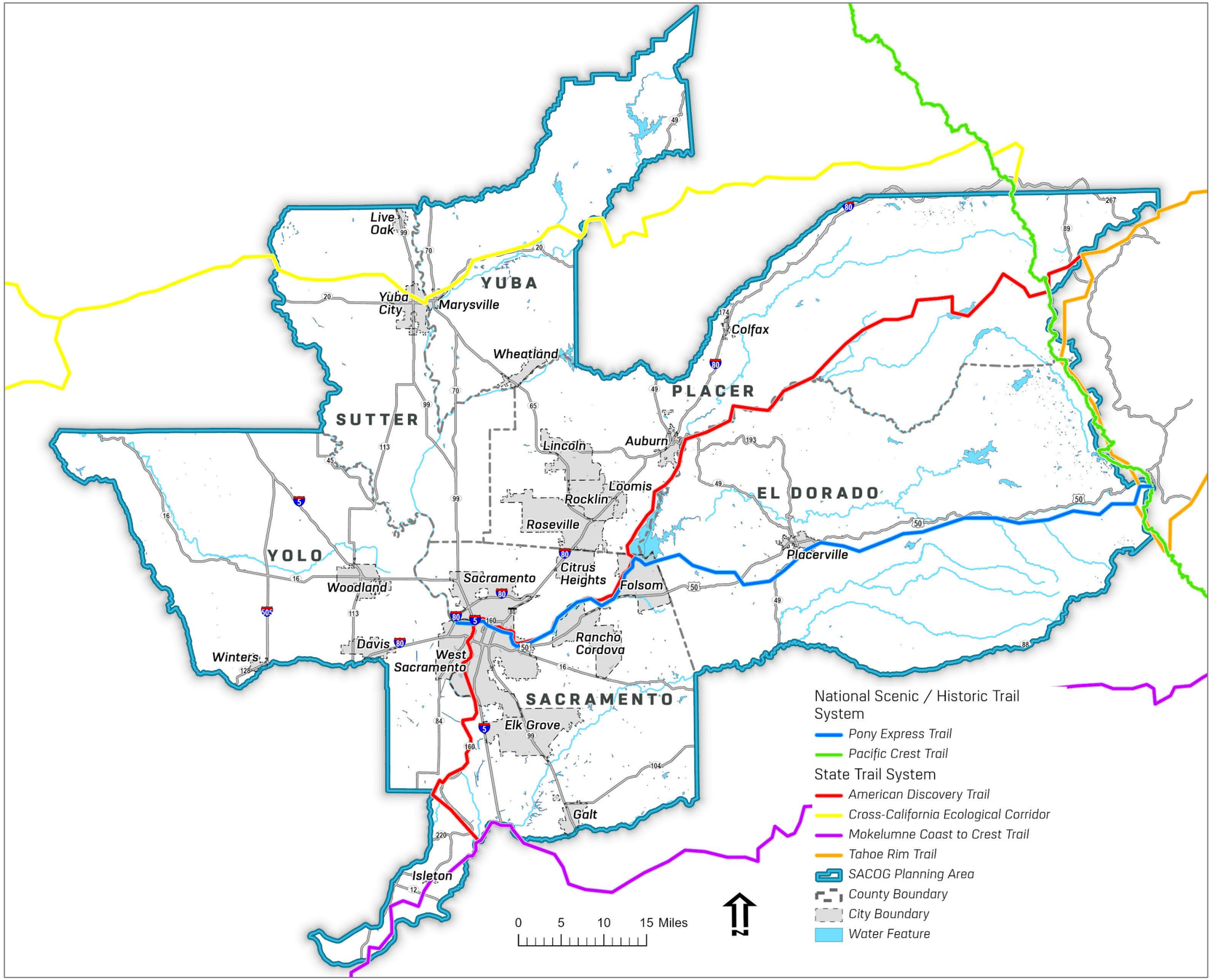
State Trails

In 2002, DPR produced a Recreation Trails Plan that provides guidance for establishing and maintaining the state's trail systems. This includes integrating program efforts with local government agencies and private organizations for trail system planning, funding, development, operation, and maintenance. A Trail Plan Progress Report was created in 2011, showing a total of 85 percent of Californians live within 10 miles of the 27 routes identified in the state's Recreation Trails System (DPR 2011). Five of these trails, which include federally designated trails, are within the plan area:

- American Discovery Trail: The American Discovery trail is managed by the American Discovery Trail Society. The California segments of the trail include the Point Reyes National Seashore, as well as routes near the San Francisco Bay, Delta, and American River Parkway. The trail runs east/west through Placer and Sacramento counties in the plan area.
- Cross California Ecological Corridor: The Cross California Ecological Corridor is not currently managed by a state or federal agency or non-profit organization. The 180-mile corridor follows Highway 20 and was recently promoted on National Geographic's Geotourism MapGuides as an important tourist destination in the west. The trail runs east/west through Placer, Yuba, and Sutter counties in the plan area.
- Mokelumne Coast to Crest Trail: The Mokelumne Coast to Crest Trail is managed by the East Bay Municipal Utility District, USFS, BLM, and Pacific Gas and Electric. The 330-mile trail travels through a diverse landscape from the East Bay hills through the Delta, across the valley, up the foothills, and to the peaks of the Sierra. The trail runs east/west through Sacramento County in the plan area.
- Pacific Crest National Scenic Trail: The Pacific Crest National Scenic Trail (PCT) is managed by USFS. The PCT spans 2,650 miles across the length of California. The trail runs north/south through El Dorado and Placer counties in the plan area.
- Pony Express National Historic Trail: The Pony Express National Historic Trail is managed by NPS and the National Pony Express Association. This heritage corridor extends 140 miles in California, tracing the historic route of the Pony Express from 1860 to 1861. This trail runs east/west through El Dorado and Sacramento counties in the plan area.

Additionally, the Folsom Lake State Recreation Area and Old Sacramento State Historic Park also contain several trails. Figure 3.15-2 shows the location of California Recreation Trails.

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Source: Prepared by SACOG in 2025.

Figure 3.15-2 National and State Trails within the Plan Area

WATER RECREATION AND FISHING

The Delta Zones within the plan region support multiple kinds of water recreation opportunities. Recreation boaters may access the Delta waterways from over 100 existing marinas and water launch sites. The Delta's waterways support many types of recreation vessels, including kayaks, canoes, motorboats, sail boats, stand-up paddle boards, water wind sports and more. Swimming is limited by the steep banks of most of the levees; however, a handful of locations have developed attractive beaches for easy water access (DPC 2022). The Delta Zones within the plan area support recreation fishing with hundreds of formal and informal access points for fishing from land or by boat (DPC 2022). Selected rivers, lakes, and reservoirs, within the plan area that are designated as local and regional parks also support fishing activities. Common fish species that are caught in the area include trout, catfish, big and small mouth bass, perch, sturgeon, bluegill, and bullhead.

Selected rivers, lakes, and reservoirs within the plan area support recreation activities. State-level water recreation areas in the plan area include Auburn State Recreation Area, Folsom Lake State Recreation Area, Brannan Island State Recreation Area, and Stone Lake. County-level and local-level water recreation opportunities are listed below in Table 3.15-2.

Table 3.15-2 County-Level and Local-level Water Recreation Opportunities within the Plan Area

County	Water Recreation Opportunities
El Dorado	Camp Richardson Marina
	Ice House Reservoir
	Lakeside Marina
	Loon Lake
	Meeks Bay Resort & Marina
	Wrights Lake
Placer County	China Bar River
	Homewood High & Dry Marina
	Hell Hole Reservoir
	Lake of the Pines
	Morning Star Lake
Sacramento County	Garcia Bend Park
	Lake Natoma
	Lower Sunrise Recreation Area
	Sacramento City Marina
	Sherman Lake
	Upper Sunrise Recreation Area
Sutter County	Verona Village River Resort
	Loveys Landing
	Live Oak Riverfront Pak
Yolo County	Cache Creek Regional Park
	Clarksburg Boat Launch
	Knights Landing Boat Launch
	Putah Creek Fishing Access

County	Water Recreation Opportunities
Yuba County	Dark Day campground, day-use area and boat launch
	Emerald Cove Marina, boat launch and picnic area
	Madrone Cove and Garden Point boat-in campgrounds
	Schoolhouse and Hornswoggle campgrounds
	Vista Point day-use area
	Lake Francis Resort

Source: Division of Boating and Waterways 2024.

The 2009 Delta Reform Act (Public Resources Code section 29759) requires the DPC to prepare an economic sustainability plan (ESP) for the Delta region. The DPC adopted the ESP in January 2012. It includes information about the Delta's agricultural and recreational economy, levees, public safety, and the impacts of the Bay Delta Conservation Plan and isolated water conveyance (as proposed at that time). The DPC used the ESP to develop a set of recommendations that informed the Delta Stewardship Council's Delta Plan policies concerning the socioeconomic sustainability of the Delta region. Initiated in 2019, the Recreation and Tourism chapter update includes a review of recreation and tourism studies completed after 2012 and the results of five focus groups held between March and April 2020. The updated chapter includes best-available current data, analysis of visitation, economic activity, and emerging recreation and tourism trends.

3.15.3 Environmental Analysis

METHODOLOGY

This program-level analysis generally evaluates potential adverse physical impacts resulting from increased use of existing parks or other recreation facilities and potential adverse physical impacts resulting from the construction or expansion of recreation facilities. Impacts related to parks and recreational facilities are qualitatively evaluated to determine whether the 2025 Blueprint would increase demand for these facilities to the degree that acceptable levels of service could not be maintained or that construction of new or expanded facilities would be required to maintain adequate service levels. It also qualitatively evaluates whether use of parks and recreational facilities would increase to the extent that substantial physical deterioration would occur or be accelerated. The analysis considers the role of existing regulations in addressing impacts to public services and evaluates the effects of forecasted regional growth through the Development Pattern and planned transportation network improvements of the 2025 Blueprint.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the 2025 Blueprint would have a significant adverse effect related to recreation resources if it would:

- increase the use of existing neighborhood and regional parks or other recreation facilities such that substantial physical deterioration of the facility would occur or be accelerated, or
- include recreation facilities or require the construction or expansion of recreation facilities that might have an adverse physical effect on the environment.

ISSUES NOT DISCUSSED FURTHER

All of the topics identified in the significance criteria above are addressed in the following analysis.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.15-1: Increase the Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities such that Substantial Physical Deterioration of the Facility Could Occur or be Accelerated

Regional Growth and Land Use Change

The forecasted regional growth identified in the 2025 Blueprint would increase demand for parks and recreation facilities. The increased use of existing parks and recreational facilities may contribute to the degradation of these resources over time. Increased demand for parks and recreation facilities would correlate with the locations of development identified for growth in the Development Pattern of the 2025 Blueprint. Center and Corridor Communities and Established Communities (where roughly 70 percent of growth is forecast in the 2025 Blueprint) are most likely to have existing neighborhood and regional parks, which could experience additional use that contributes to substantial physical deterioration.

Within Center and Corridor Communities and Established Communities, the service area of parks and recreational facilities would not generally increase, but the total number of residents served would increase. In addition, the availability of land for new or expanded parks may be limited in these existing communities. Local parks and recreation districts set and implement level of service standards and determine the siting and timing of park maintenance. Although the inability to meet the level of service goals is not, itself, considered a CEQA impact, it suggests the need for new or expanded parks so that physical deterioration of existing parks and recreational facilities would not be accelerated. Local planning departments, when reviewing development application, consider the service ratios, policies, and standards established to limit the potential adverse effects to recreation facilities' capacity, programming, personnel, and equipment needs from individual projects.

In some cases, particularly in locations where more housing and compact development is projected in existing Center and Corridor and Established Communities, implementation of the 2025 Blueprint could require additional capital capacity, programming, equipment, or personnel to ensure acceptable levels of service. Compliance with applicable local and regional service standards for parks and recreation facilities would address the potential that implementation of the 2025 Blueprint could result in increased use of parks and recreational facilities that may exceed the facilities' existing service capacity. Programmed improvements to address degradation of existing parks and recreation facilities include regular park maintenance and park upgrade strategies, as determined by local jurisdictions.

Transportation Network Improvements and Programs

The transportation projects identified in the 2025 Blueprint would not be expected to directly increase the use of recreational facilities but could improve the efficiency of regional transportation systems in a manner that facilitates diversified use of area parks. For example, instead of only visiting the park near their homes, residents may visit parks further from their residence if improved bicycle and pedestrian infrastructure or public transportation make doing so easy, efficient, and enjoyable. This could reduce the overuse of individual facilities located near higher concentrations of dwelling units (particularly in Center and Corridor Communities).

Planned transportation improvements that increase capacity, such as road widenings, newly constructed roads, and high-occupancy vehicle lanes, also have the potential to increase access to parks and recreation facilities. This is especially true for heavily traveled areas where such projects would alleviate bottlenecks and reduce congestion. Similarly, implementation of the region's transit projects would increase access to parks and recreational facilities by increasing the frequency of transit service and expanding the service area to include new parks and recreation facilities.

Summary

As described above, the population growth forecast through 2050 would be directed towards existing communities. For this reason, it is possible that implementation of the 2025 Blueprint would result in increased demand for parks and recreational facilities that impedes achievement of acceptable service levels. Transportation improvements—

including expanded bicycle and pedestrian facilities—included in the 2025 Blueprint would enhance the overall efficiency of the regional transportation system and would enhance overall community connectivity. This could lead to increased use of existing local and regional park and recreation facilities but would also make it easier for residents to divert trips away from facilities that would otherwise experience higher visitation levels that could potentially cause or accelerate physical wear and deterioration.

In the case that service-level standards of parks and recreational facilities are not met, substantial physical deterioration of parks and recreation facilities in the plan area could occur or be accelerated. During project planning, design, and project-level environmental review, local implementing agencies routinely check for, and require, adequate service levels for parks according to parks and recreation master plans, local codes, and ordinances and in coordination with the appropriate parks district(s). Through these established processes, the planning departments of local implementing agencies have a vested authority to address the potential for physical deterioration of recreational facilities at the project level. However, because level of service standards may not be achievable at the project level and implementing agencies have the ability to approve projects that do not meet level of service standards, the degradation of quality of recreational facilities would be a **potentially significant** impact.

Mitigation Measures

SACOG does not have the authority to require the implementing agencies to adopt the identified mitigation measure; the mitigation measure is within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measure or other comparable measures identified by the lead agency at a project level would reduce the impacts related to deterioration of recreational facilities, and agencies with jurisdiction to adopt these measures should do so (PRC Section 21081).

Mitigation Measure 3.15-1: Require Provision of Adequate Park Facilities

During project planning, design, and project-level environmental review, implementing agencies shall ensure that adequate park services are achieved. This shall be documented prior to project approval in the form of a capacity analysis approved by the applicable parks district.

Significance after Mitigation

If implemented, Mitigation Measure 3.15-1 would ensure that park facilities are provided for each new development so that regional growth does not contribute to the physical deterioration of existing parks. However, due to the limited land available in some Center and Corridor Communities, this mitigation measure may not be feasible for all projects in the plan area. Additionally, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. Because SACOG does not have authority over implementing agencies, and resident-to-acre standards are not always achievable for infill development, this impact would be **significant and unavoidable.**

Impact 3.15-2: Include Recreation Facilities or Require the Construction or Expansion of Recreation Facilities that might have an Adverse Physical Effect on the Environment

Regional Growth and Land Use Change

As discussed in Impact 3.15-1, the forecasted regional growth identified in the 2025 Blueprint would increase demand for parks and recreational facilities. New parks and recreation facilities would be required to meet new demand generated by development, particularly in Developing Communities that may not currently provide substantial park facilities. Residential developments would need to identify land for parks as part of their entitlements or pay in-lieu fees, pursuant to the Quimby Act and local regulations. Generally, the land needed for additional parks would be located within identified growth areas in the 2025 Blueprint because they would be citied near the new residents that would be served by the facilities. Physical changes associated with the improvements to facilities located on vacant and underutilized parcels within Center and Corridor Communities and Established Communities, as well as the conversion of undeveloped land to parks in Established Communities and Developing Communities, would be within the scope of the development evaluated throughout this Draft EIR.

In addition, local jurisdictions have plans to address increased demand for parks. The population growth in the 2025 Blueprint is consistent with and in some cases less than the rate of growth forecast in city and county general plans. These general plans serve as the basis for facility improvements in the parks and recreation master plans developed by the local jurisdictions. For this reason, the 2025 Blueprint is not anticipated to substantially increase demand for park facilities beyond those programmed for development in the local agencies' planning documents.

Therefore, because park development is within the scope of the regional growth pattern evaluated throughout this Draft EIR, the physical effect on the environment from the construction and expansion of recreation facilities has been disclosed at the plan level. Development of recreation facilities would not have additional adverse physical effects on the environment that are not adequately evaluated in the resource sections of this Draft EIR.

Transportation Network Improvements and Programs

As discussed in Impact 3.15-1, transportation projects identified in the 2025 Blueprint, including roadway, transit, bicycle and pedestrian facilities, would enhance community and regional connectivity, which could result in increased use of parks. Some of these transportation network improvements and programs could also directly provide or support recreational facilities (e.g., trails). The 2025 Blueprint's regional growth pattern includes sufficient land to support the expansion of parks and recreation facilities, and county and city parks and trails master plans throughout the region incorporate goals to maintain, improve, and enhance access to these resources. The transportation projects in the 2025 Blueprint would not increase the service population of any recreation provider in manner that could result in the need for new or expanded recreational facilities. The physical effect on the environment from the transportation network improvements that would provide recreation facilities are evaluated throughout this Draft EIR.

Summary

Parks and recreation areas would be developed within the areas identified for growth, as residential developments indicated in the 2025 Blueprint would need to identify land for parks or pay in-lieu fees, as part of their entitlements. Park and recreation development is within the scope of the overall Development Pattern evaluated throughout this Draft EIR. Therefore, the implementation of the 2025 Blueprint as it relates to the physical environmental effects of new or expanded recreational facilities would be **less than significant**.

Mitigation Measures

No mitigation is required.

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3.16 TRANSPORTATION

This section describes the applicable federal, state, and local transportation regulations and policies; discusses the existing roadway network and transportation facilities in the project area; and analyzes the potential impacts from implementation of the 2025 Blueprint on transportation. Mitigation measures that would reduce impacts, where applicable, are also discussed. Toxic air contaminants and noise generated by traffic are evaluated in Sections 3.3, "Air Quality," and 3.12, "Noise and Vibration." Analysis of the greenhouse gas (GHG) emissions associated with the transportation pattern in the 2025 Blueprint are included in Section 3.7, "Greenhouse Gas Emissions and Energy."

In response to the notice of preparation, SACOG received comments related to transportation from the Sacramento Metropolitan Air Quality Management District that request an assessment of vehicle miles traveled (VMT), including induced VMT, and provides example VMT reduction strategies. This comment has been carefully reviewed and considered by SACOG and is reflected in the analysis of impacts in this chapter. Appendix A includes all comments received in response to the NOP.

3.16.1 Regulatory Setting

FEDERAL

Infrastructure Investment and Jobs Act

The Infrastructure Investment and Jobs Act (IIJA) was signed into law in November of 2021 and legislates United States transportation funding and set expectations for metropolitan transportation planning. In general, IIJA continues all the metropolitan planning requirements that were in effect under the previous federal legislation, Fixing America's Surface Transportation (FAST) Act.

Under IIJA, the US Department of Transportation, Federal Highway Administration (FHWA), and Federal Transit Administration require that metropolitan planning organizations (MPOs) prepare and submit long-range transportation plans. In regions that are designated federal air quality non-attainment areas, these plans must be updated at least every 4 years. The federal requirements for metropolitan transportation plans (MTPs) include the following (US Code [USC] Title 23 Section 134[i]):

- **Transportation facilities.** An identification of transportation facilities (including major roadways, transit, multimodal and intermodal facilities, and intermodal connectors) that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions.
- **Mitigation activities.** A long-range transportation plan shall include a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan. The discussion shall be developed in consultation with federal, state, and tribal wildlife, land management, and regulatory agencies.
- **Financial plan.** A financial plan that demonstrates how the adopted transportation plan can be implemented, indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan, and recommends any additional financing strategies for needed projects and programs. The financial plan may include, for illustrative purposes, additional projects that would be included in the adopted transportation plan if reasonable additional resources beyond those identified in the financial plan were available. For the purpose of developing the transportation plan, the MPO, transit operator, and state shall cooperatively develop estimates of funds that will be available to support plan implementation.

- **Operational and management strategies.** Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods.
- **Capital investment and other strategies.** Capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure and provide for multimodal capacity increases based on regional priorities and needs.
- **Transportation and transit enhancement activities.** Proposed transportation and transit enhancement activities.

According to the 2024 Regional Transportation Plan (RTP) Guidelines for MPOs (CTC 2024) the following changes or emphasis were added to FAST Act expectations:

- **Scope of Planning Process.** The IIJA expands the scope of consideration of the metropolitan planning process to include: –
  - **Public Participation of Interested Parties**. In addition to all entities listed in Chapter 4, IIJA (Section 3003) requires that MPOs provide affordable housing organizations with a reasonable opportunity to comment on the RTP. (23 USC Section 134 [i][6][A]). IIJA included a provision in Title 49 of the USC, Section 5304(f)(3), to encourage the use of technology such as social media and other web-based tools to further encourage public participation and to solicit public feedback during the transportation planning process.
  - **Housing Coordination Plan.** MPOs serving a Transportation Management Area may develop a housing coordination plan that includes projects and strategies that may be considered in the RTP. MPOs may align transportation improvement projects with proposed housing developments – and can coordinate these projects with local and regional housing and land use agencies. MPOs may consider managing the effects of increased VMT as it relates to housing and economic developments. MPOs may coordinate the location of existing and planned housing and employment to coordinate transportation options that connect housing and employment. MPOs may include a comparison of RTPs to land use management plans, such as zoning plans, which may affect VMT, public transit, and housing development (23 USC Section 134 [i][4][C]).
- **Capital Investment and Other Strategies.** The IIJA continues to require a MTP to include strategies to meet current and projected transportation infrastructure needs (23 USC Section 134[i][2][G]).
- **Resilience and Environmental Mitigation Activities.** The IIJA continues the FAST ACT's focus on the resiliency of the transportation system as well as activities to reduce stormwater runoff from transportation infrastructure. In addition, it requires strategies to reduce the vulnerability of existing transportation infrastructure to natural disasters (23 USC Sections 134[d][3] & [i][2][G]).
- **Transportation and Transit Enhancement Activities.** The IIJA continues to require MTP to include transportation and transit enhancement activities. When proposing these activities, the plan must now include:
  - consideration of the role that intercity buses may play in reducing congestion, pollution, and energy consumption in a cost-effective manner; and
  - strategies and investments that preserve and enhance intercity bus systems (including those that are privately owned and operated (23 USC 134[i][2][H]).
- **Participation by Interested Parties in the Planning Process.** The FAST Act explicitly adds public ports and certain private providers of transportation, including intercity bus operators and employer-based commuting programs, to the list of interested parties that an MPO must provide with reasonable opportunity to comment on the transportation plan (23 USC Section 134[i][6])[A]).
- **Congestion Management.** The Congestion Management Process (CMP) is a collaboratively developed set of objectives, performance metrics, and strategies the Sacramento region will use to monitor and manage traffic congestion on select roadways that comprise its CMP network. The FHWA requires all metro regions with a population of more than 200,000 to maintain a CMP. SACOG's CMP will be part of its MTP and bring several benefits, including:

- providing a system to quantitatively monitor the region's progress toward MTP goals,
- identifying and prioritizing cost-effective, multi-modal strategies to address congestion, and
- aligning specific congestion management projects and strategies with MTP policies.

SACOG's current CMP work involves developing a methodology to measure, monitor and manage congestion and reliability on the regionally significant roadways across the SACOG region. It will incorporate data from the National Performance Measurement Research Data Set, which provides detailed vehicle speed information based on data collected from millions of GPS-enabled mobile devices.

STATE

State requirements for long-range transportation plans are similar to the federal regulations. However, key additional requirements described in Government Code Section 65080 include:

- compliance with CEQA;
- consistency with the State Transportation Improvement Program;
- use of program-level performance measures that include goals and objectives;
- inclusion of a policy element, an action element, and a financial element; and
- inclusion of a Sustainable Communities Strategy (SCS) for MPOs (see Senate Bill [SB] 375 discussion below).

California Transportation Commission Regional Transportation Plan Guidelines

The California Transportation Commission (CTC) publishes and periodically updates guidelines for the development of long-range transportation plans, such as SACOG's MTP/SCS. Pursuant to Government Code Section 65080(d), each regional transportation planning agency (RTPA) is required to adopt and submit an updated RTP to CTC and the California Department of Transportation (Caltrans) every 4 years. SACOG is the designated RTPA for Sacramento, Yolo, Sutter, and Yuba counties. The El Dorado County Transportation Commission (EDCTC) and the Placer County Transportation Planning Agency (PCTPA) are the RTPAs for their respective counties.

Under Government Code Section 14522, the CTC is authorized to prepare guidelines to assist in the preparation of RTPs. The most recent update to the RTP guidelines was published in 2024 and includes separate guidance for RTPAs and MPOs and new checklists for RTP content. See Appendix E: Plan Performance in the 2025 Blueprint.

Sustainable Communities and Climate Protection Act

California's Sustainable Communities and Climate Protection Act (SB 375) (Stats. 2008, ch.728) requires MPOs to prepare an SCS that demonstrates how the region will meet its GHG per capita emissions reduction targets through integrated land use, housing, and transportation planning. Specifically, the SCS must identify a transportation network that is integrated with the forecasted development pattern for the plan area and will reduce GHG emissions (over a 2005 base year) from automobiles and light trucks in accordance with targets set by the California Air Resources Board (CARB). In March 2018, CARB established new GHG emissions reduction targets for all MPOs in the state. SACOG's GHG emissions reduction target for Year 2035 was increased from 16 percent to 19 percent (CARB 2018; see Section 3.7, "Greenhouse Gas Emissions and Energy," for more detailed discussion on the SACOG SB 375 target). CARB is required to update regional GHG reduction targets by no later than 2026. While increasing the SB 375 targets, CARB also noted that the increase fell short of what was needed to fully achieve state goals on GHG emissions reduction and climate change mitigation. In combination, the staff report and presentation materials to the CARB Board show that in total, the revised SB 375 GHG emissions reduction targets for all of the state's MPOs would result in a statewide reduction of 19 percent (compared to 18 percent from the prior SCS achievement), but that a 25 percent reduction was needed to fully meet the GHG emissions reduction goals of the Scoping Plan (CARB 2017). The difference between the 19 percent resulting from CARB's updated SB 375 targets and the 25 percent identified need is referred to in other various CARB documents as the "gap."

In the SB 375 target resetting, CARB recognized that additional state action was needed to close this gap: "The recommended targets also recognize that additional State policy and funding tools are being developed to support further VMT reduction that will both help the State overall in achieving needed emission reductions and support MPOs in their ability to achieve higher targets by 2035." The categories of state action to accomplish this, with help of MPOs and other organizations, were funding mechanisms to incentivize infill development; improved performance analysis to assist agencies in funding supportive transportation projects; expanding investment in transit and active transportation; and pricing policies and programs. A common theme to all of the additional actions is the focus on VMT reduction.

Two additional state documents provide context for understanding how these GHG emissions reduction targets relate to the transportation issues discussed in this chapter. One is the Scoping Plan itself, which also recognizes that statewide collaboration is needed to address the gap; and further, that the gap in GHG emissions reductions would be closed through VMT reduction strategies (CARB 2022a):

> Transforming the transportation sector goes beyond phasing out combustion technology and producing cleaner fuels. Managing total demand for transportation energy by reducing the miles people need to drive on a daily basis is also critical as the state aims for a sustainable transportation sector in a carbon neutral economy. Though GHG emissions are declining due to cleaner vehicles and fuels, rising VMT can offset the effective benefits of adopted regulations.

The second document, published by CARB in January 2019, provides additional detail on the scope of the challenge, and its relationship to CEQA (CARB 2019):

> An MTP/SCS that meets the applicable SB 375 targets alone will not produce the GHG emissions reductions necessary to meet state climate goals in 2030 nor in 2050. This means that SB 375 targets are not stand-alone CEQA thresholds for GHG or transportation impact analysis (though SCS compliance may nonetheless entitle projects to certain CEQA exemptions or streamlining procedures pursuant to statute). In other words, a project that is consistent with an SCS may be eligible for certain exemptions, but compliance does not necessarily more broadly imply consistency with state climate goals nor with science-based GHG reduction targets, in CARB staff's non-binding view. Some land use development projects contemplated in an SCS that will be operational in 2030 and 2050 will be consistent with state climate goals, and SB 375 defines project circumstances under which CEQA streamlining is available to qualified projects consistent with an SCS. Other projects may need to consider additional mitigation measures to further reduce per capita light-duty transportation-related GHG emissions to levels that would not conflict with state climate goals. Likewise, certain transportation infrastructure projects that will be operational in 2030 and 2050 that substantially increase VMT may conflict with state climate goals, even if they are included in an SCS that meets the applicable SB 375 targets.

The 2022 Scoping Plan illustrates that despite cleaner vehicles and low-carbon fuels, the path to carbon neutrality by 2045 also depends on reducing per capita VMT (the total passenger vehicle miles driven by an average person in California on any given day). To meet the carbon neutrality goal, the 2022 Scoping Plan proposes reducing statewide 2019 VMT 25 percent by 2030 and by 30 percent by 2045 (CARB 2022b).

Senate Bill 743 VMT Analysis (Public Resources Code Section 21099)

SB 743 (Stats. 2013, ch. 386) required the Governor's Office of Planning and Research (OPR, now the Governor's Office of Land Use and Climate Innovation [LCI]) to establish new metrics for determining the significance of transportation impacts of projects within transit priority areas (TPAs) and allows OPR to extend use of the metrics beyond TPAs. OPR selected VMT as the preferred transportation impact metric and applied their discretion to require its use statewide. This legislation also established that aesthetic and parking effects of a residential, mixed-use residential, or employment center projects on an infill site within a TPA are not significant impacts on the environment. The revised CEQA Guidelines that implement this legislation became effective on December 28, 2018, and state that vehicle level of service (LOS) and similar measures related to delay shall not be used as the sole basis for determining the significance of transportation impacts, and these changes took effect on July 1, 2020. Finally, the legislation establishes a new CEQA exemption for a residential, mixed-use, and employment center project that is (a)

within a TPA, (b) consistent with a specific plan for which an EIR has been certified, and (c) consistent with an SCS. This exemption requires further review if the project or circumstances change significantly.

To aid in SB 743 implementation, the following state guidance has been produced.

- Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory) (OPR 2018);
- *2022 Scoping Plan for Achieving Carbon Neutrality* (CARB 2022a); and
- Local Development – Intergovernmental Review Program Interim Guidance, Implementing Caltrans Strategic Management Plan 2015-2020 Consistent with SB 743 (Caltrans 2016).

Of these documents, the *2022 Scoping Plan* is most relevant for the transportation impact analysis of the 2025 Blueprint. It provides recommendations for VMT reduction thresholds that would be necessary to achieve the State's GHG reduction goals and acknowledges that the SCS targets alone are not sufficient to meet climate goals.

LOCAL REGULATIONS

Regional Transportation Planning Agencies and Other Sub-Regional Agencies

Within the SACOG region there are several sub-regional agencies that oversee some planning, programming, and administration functions related to planned transportation improvements. These sub-regional agencies coordinate directly with local agencies in their geographic part of the SACOG region. In some cases, these sub-regional agencies also provide transportation services, such as transit. These sub-regional agencies include:

- PCTPA is designated in state law as the RTPA for Placer County. PCTPA is also the county's Congestion Management Agency, a statutorily designated member of the Capitol Corridor Joint Powers Authority, and the airport land use planning body and hearing board for Lincoln, Auburn, and Blue Canyon Airports. As part of their Joint Powers Agreement, PCTPA is the designated administrator for the South Placer Regional Transportation Authority (SPRTA). Under an agreement with SACOG, PCTPA also represents Placer jurisdictions in federal planning and programming issues. Since the PCTPA has a local Agency-state Agreement for federal aid projects, it is also eligible to administer federal projects. PCTPA is also responsible for adopting and implementing the RTP for Placer County. As part of a memorandum of understanding with SACOG, PCTPA's RTP is integrated into SACOG's regional MTP/SCS.
- EDCTC is designated in state law as the RTPA for El Dorado County. As the RTPA, the EDCTC serves as the planning and programming authority for planned transportation improvements on the western slope of El Dorado County, excluding those areas within the Tahoe Regional Planning Agency boundaries. In 2008, EDCTC was designated as the Airport Land Use Commission (ALUC) for the Placerville, Georgetown, and Cameron Park airports. EDCTC is also responsible for adopting and implementing the RTP for El Dorado County. As part of a memorandum of understanding with SACOG, EDCTC's RTP is integrated into SACOG's regional MTP/SCS.
- Sacramento Transportation Authority (STA) is a local transportation authority pursuant to the California Public Utilities Code Sections 131300—131304. The STA is primarily responsible for administering the Measure A program that is supported by a 0.5 percent sales tax in Sacramento County for transportation improvements. The STA also administers the Sacramento Metropolitan Freeway Service Patrol program in cooperation with Caltrans and the California Highway Patrol. The Freeway Service Patrol's primary objective is to reduce the traffic congestion caused by roadway incidents. The STA Governing Board and staff also serve as the Governing Board and staff of the Sacramento Abandoned Vehicle Service Authority, which provides funding to participating local jurisdictions for the abatement of abandoned vehicles and vehicle parts on streets and private property.
- Capital Area Regional Tolling Authority (CARTA) develops and operates toll facilities in the Sacramento region. CARTA is a Joint Powers Authority between SACOG, the Yolo Transportation District, and Caltrans District 3. Each of these agencies has appointed directors to serve on CARTA's governing board. CARTA also includes non-voting directors from Sacramento Transportation Authority, Placer County Transportation Planning Agency, and El

Dorado County Transportation Commission. CARTA is a collaborative effort to create a centralized system and coordinate toll prices, rules, and discounts across the Sacramento region.

General Plans

State law requires cities and counties to adopt general plans, which must include, among others, a circulation element. The circulation element is required to map and provide a policy framework for circulation via all modes and public utilities. The information in the circulation element is required to be correlated with the land use element, and serve the projected population and employment growth in a manner consistent with the general plan vision. Circulation elements generally address expectations for transportation network operations and safety based on goals and policies of the city or county. Circulation elements typically address the roadway network and its traffic operations, goods movement, public transit, bicycle facilities, and pedestrian facilities, among other things.

Airport Land Use Compatibility Plans

Each public airport has an ALUC that is responsible for preparing airport land use compatibility plans (ALUCP). The statutes governing ALUCs and ALUCPs are set forth in Division 9, Part 1, Chapter 4, Article 3.5, Sections 21670 – 21679.5 of the California Public Utilities Code.

The desired outcome or result of airport land use compatibility planning is to "minimize the public's exposure to excessive noise and safety hazards" while providing for the "orderly expansion of airports" according to the *California Airport Land Use Planning Handbook* (Caltrans 2011). The ALUCPs influence land use and transportation decisions near airports and have been considered in the development of the 2025 Blueprint. SACOG serves as the ALUC for airports in Yuba, Yolo, Sutter, and Sacramento counties; except for the University of California, Davis (UC Davis) airport and any located on tribal land. PCTPA and EDCTC serve as the ALUCs for their respective counties.

Bicycle, Pedestrian, and Trails Master Plans and Active Transportation Plans

Bicycle, pedestrian, trails, master plans and active transportation plans are planning documents used to guide future development of a jurisdiction's bicycle and pedestrian facilities. At a minimum, these plans usually contain an inventory of existing facilities, a discussion of the plan's goals, recommendations for new projects, and an implementation plan. The first version of the master plan was developed for the plan area in 2004 and has been updated several times. In August 2022, the SACOG Board of Directors approved the *Sacramento Region Trail Network Action Plan*. as the latest version. SACOG is currently developing the *2026 Implementation Strategy* to support technical assistance for the region's jurisdictions who are building segments of the network.

Mobility Zones

SACOG is advancing regional Mobility Zones to advance clean, shared, and active transportation investments in equity-priority communities. The program focuses on 10 neighborhood-sized zones across the SACOG region with high transportation and equity need. Mobility Zones prioritizes projects that improve mobility within each zone and has funding to implement some of the prioritized projects. This work, including zone identification and project prioritization, is carried out in partnership with Community-Based Organizations and community leaders.

The Mobility Zones program envisions a new model for equity-centered, community co-created infrastructure project development that reinvents how regional transportation projects are prioritized for state and federal investment in the SACOG region. The program is built on four goals, including:

- Access: Expand affordable, reliable transportation options that allow people of all ages and abilities get to where they want to go safely.
- Equity: Center the voices of people and places that have been historically marginalized or underserved by transportation decisions.
- Feasibility: Advance impactful projects that are supported by communities, cost-effective, and ready for near-term investment and implementation.

- Quality of life: Improve the ease, quality and comfort of travel options and limit environmental and public health burdens.

3.16.2 Environmental Setting

The plan area consists of transportation routes, including highways, rail alignments, bicycle/multi-use trails, state routes, roads, and other transportation right-of-way in the plan area. The major components of the existing transportation system include three interstate highways, several state highways, numerous local arterial roadways, a deep water shipping port, a major international airport, numerous general aviation airports, freight and passenger rail service, and a public transit system that includes approximately 40 miles of light rail transit service and several thousand miles of regional and local bus routes. The components of the existing and proposed transportation system in the plan area are described below.

ROADWAY SYSTEM

For purposes of this EIR, the roadway network within the plan area is categorized into several functional classifications as follows:

Freeways and Highways

A freeway is a divided highway with full control of access and two or more lanes for the exclusive use of high volumes of traffic in each direction. Intersections with other streets and roads are grade-separated and provide through ramps and connectors. Because of the grade-separations and access control, these facilities do not provide direct access to land. These types of facilities serve primarily regional through-trips and connect to other regional and interregional facilities. Within the "Freeway" classification, several sub-classifications are of interest and importance to the 2025 Blueprint, since the prevalence of freeway projects and improvements varies widely by the following sub-classifications:

- High-Occupancy Vehicle/High-Occupancy Toll Lanes. High-Occupancy Vehicle (HOV) Lanes are restricted to private vehicles with two-or-more persons (exceptions are allowed for select partial or zero emission vehicles), motorcycles, and public transit vehicles during commute hours, but allow all private vehicles to use the lanes during non-commute hours. HOV lanes are intended to provide an incentive for commuters to carpool by providing faster travel speeds than the parallel general-purpose lanes during peak periods. In addition to HOV Lanes, another type of managed lanes are High-Occupancy Toll (HOT) Lanes where drivers are required to pay a fee for using it. There are no existing HOT Lanes in the region but they are proposed for future implementation.
- Freeway Ramps and Connectors. Ramps and connectors link the region's surface street system to the freeway system or connect one designated freeway to another.
- Freeway Auxiliary Lanes. Auxiliary lanes are added at an on-ramp and then drop at the next downstream off-ramp to help facilitate merging and diverging traffic. In cases where parallel local streets do not exist, longer auxiliary lanes may extend beyond the next downstream interchange.
- General Purpose Freeway Lanes. Freeway lanes that do not fall into one of the three categories above are characterized as general purpose freeway lanes. These lanes allow all types and occupancy classes of vehicles at all times of the day.

The freeway and highway systems are under the jurisdiction of Caltrans. Several freeways and state highways are included in the plan area and are depicted in Figure 3.16-1. Below is a description of the major freeways and highways within the plan area.

- Interstate 5 (I-5) is a 4 to 10-lane freeway that runs from north to south through the western portion of the plan area and is the largest of the major regional facilities in the area. I-5 is a major federal interstate freeway and travels from the Canadian border to Mexico.

- **Interstate 80 (I-80)** is a 6 to 14-lane freeway that runs from west to east from the San Francisco Bay Area to the California/Nevada state line, passing through Yolo, Sacramento, and Placer counties in the plan area. I-80 is also part of the federal interstate system, connecting the East Coast of the United States with the Pacific Rim.
- **Interstate 505 (I-505)** is a 4-lane freeway extending 22 miles from I-5 near Dunnigan south to Yolo County near Winters. Outside of Yolo County and the SACOG region, I-505 merges with I-80 in Vacaville. I-505 connects areas north of Sacramento to areas east of Sacramento while bypassing traffic in the urbanized region of Sacramento and its suburbs.
- **US Highway 50 (US 50)** is a 4 to 10-lane east-west route that is part of the California State Highway system, which predates the federal interstate system. US 50 traverses the plan area from the eastern portion of Yolo County through Sacramento and El Dorado counties.
- **State Route (SR) 20** is a state highway that runs east and west north of Sacramento from the North Coast to the Sierra Nevada. In the SACOG region, this 2 to 4-lane facility runs through Yuba and Sutter counties and through the cities of Marysville and Yuba City where it serves as a local street.
- **SR 49** is part of the state highway system while also serving as Main Street in several foothill communities. In the SACOG region, SR 49 is a 2 to 6-lane, north-south highway that traverses the central portion of the plan area through El Dorado, Placer, and Yuba counties.
- **SR 65** is a 2 to 5-lane, north-south highway that traverses the east side of the plan area through Sacramento, Placer, and Sutter counties. The route connects automobile and truck traffic originating in the I-80 corridor (in the Roseville/Rocklin area) to the SR 70/99 corridor (in the Marysville/Yuba City area).
- **SR 70** is a 2 to 4-lane, north-south highway on the western side of the plan area through Sutter and Yuba counties. SR 70 is a local street through downtown Marysville.
- **SR 99** is the second largest regional facility in the plan area. SR 99 is a 2 to 8-lane north-south highway and freeway that traverses the central portion of the plan area through Sacramento and Sutter counties. SR 99 serves ten of the state's urbanized areas, making it an important corridor in the Central Valley. The route also serves as a main access between several small cities and urban areas in Sacramento County.

Surface Streets

Any street type that predominantly intersects with other streets at-grade are surface streets. There is a wide range of sub-classifications of surface streets. For many practical and historical reasons, surface streets often do not fall neatly into one sub-classification or another, and some surface streets may have characteristics of more than one sub-classification. Surface street types are described below.

Expressways

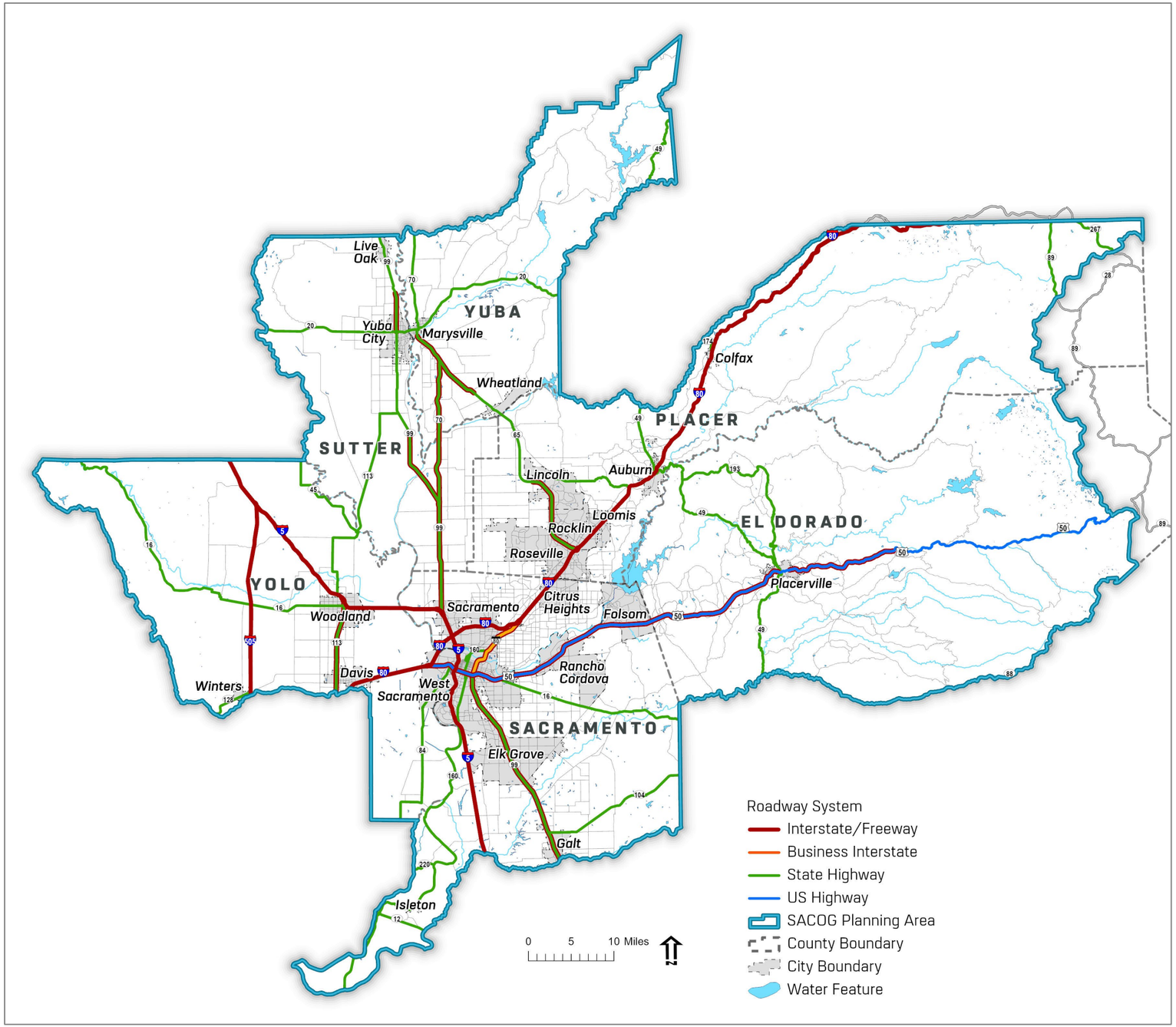
An expressway facility intersects other roadways at-grade, but direct land access to the facility is very limited. Where allowed, driveways are usually consolidated (i.e., one driveway serves several fronting properties), or designed with a median through frontage roadways. Medians are raised, and midblock turns are disallowed. The spacing of signalized intersections is usually very wide, generally greater than 0.5 mile.

Arterial Roadways

Arterial facilities also limit direct land access but are less restrictive than expressways. Intersection spacing is generally about 0.25 mile and may be less. Arterials are usually multi-lane (i.e., two-or-more lanes per travel direction). Most arterial roadways have raised medians, but midblock turns and two-way-left turn lanes are also common. Intersections usually include separate turning lanes.

Collector Streets

Collector facilities generally do not limit direct land access. Intersection spacing is less than 0.25 mile, and unsignalized, stop-sign-controlled intersections are common. Collectors include a mix of two- and four-lane facilities. If provided, medians are usually striped and rarely raised.



Source: Prepared by SACOG in 2025.

Figure 3.16-1 Existing Highway and Freeway Network in the Plan Area

Local Streets

Local facilities are intended to provide land access. The majority of local streets are provided in residential areas, although local streets are provided in mixed and employment-oriented areas, too. Local streets are two lanes, one lane per travel direction. Most local streets do not have medians or center strips.

Table 3.16-1 provides a tabulation of roadway classes by route miles and lane miles for the SACOG region. This table compares data from years 2020 and 2022, the most recent year for which data is available, to the projected 2025 Blueprint outcomes. The two overall classifications are minor roadways (collectors/local streets) and major roadways (arterials/expressways, auxiliary lanes/ramps, HOV lanes, and general-purpose freeways). Because the major roadways (arterial and above roadway classes) carry more traffic and transit trips, they have a greater effect on the transportation performance measures.

TRANSIT SYSTEM

Local transit service in the region is currently provided by 12 public transit operators and two private non-profit Consolidated Transportation Services agencies of varied sizes and types of service, as shown in Figure 3.16-2. These agencies range in size from Sacramento Regional Transit (SacRT), which operates light trail and bus routes, to small systems like the City of Auburn, which operates a small on-demand transit service.

For purposes of this report, transit services in the plan area were categorized by "service type." Service type is defined according to unique combinations of right-of-way (e.g., exclusive vs. mixed with traffic), traction (rail/steel wheel vs. rubber tire), vehicle technology, and operational features like station or stop spacing and running speeds. As with roadway classifications, in some cases, actual transit service may include characteristics of more than one service type, and some "gray areas" between service types exist (e.g., between "light rail transit" and "streetcar").

Regional (Intercity) Rail and Bus Service

Intercity rail service is an electric or diesel propelled railway for passenger trains operated on a regular basis by Amtrak or under contract with a transit operator for transporting passengers between and within urbanized and outlying areas. Such rail service is generally characterized by multi-trip tickets, specific station-to-station fares, railroad employment practices, and considerable distance between stations. Intercity bus service is similar to intercity rail service except that it uses the roadway system to transport passengers.

Within the plan area, Amtrak operates two intercity rail services – the Capitol Corridor and the San Joaquins routes. The Capitol Corridor has stations in Auburn, Rocklin, Roseville, Sacramento, and Davis, connecting Placer, Sacramento, and Yolo counties to stations in the San Francisco Bay Area. It operates 24 trains daily on weekdays, and 22 on weekends, and carried over 1 million passengers between Auburn and San Jose in 2024 (CCJPA 2024). The Capital Corridor service is supplemented by bus connections to Lake Tahoe, Reno, Redding, Eureka, and Santa Barbara. The Capitol Corridor was the sixth busiest Amtrak-operated route in the nation in 2024 (Amtrak 2024).

The Amtrak San Joaquins route provides intercity rail service between the Bay Area and Sacramento and Bakersfield, with bus connections to Los Angeles, Redding, and Yosemite National Park. The Sacramento-to-Bakersfield segment has two daily round trips. Five daily round trips between Oakland/San Francisco and Bakersfield are also accessible by Sacramento and Elk Grove riders through Amtrak connecting buses. Amtrak buses also serve the Davis station to allow riders to connect to all San Joaquins trains. The San Joaquins route shares rail equipment, train crews, and maintenance facilities in Oakland with the Capitol Corridor. A planned Valley Rail improvement in the 2025 Blueprint would enable two San Joaquins round trips and up to five Altamont Corridor Express round trips between Sacramento and the San Joaquin Valley. In addition, the Coast Starlight and California Zephyr trains pass though the region stopping in Davis, Sacramento, Roseville, and Colfax on their way from Seattle to Los Angeles and from Chicago to San Francisco, respectively.

Greyhound Bus operates intercity bus services in the region to connect to a variety of local and national destinations. There are station stops in Colfax, Marysville, and Roseville with a major regional station in Sacramento at Richards

Boulevard. The Richards Boulevard bus station connects with the SacRT light rail station at Township 9. Greyhound offers regular service to San Francisco and Los Angeles from its Sacramento station.

Light Rail

Light rail (LRT) is a rail system designed for operating in lighter-demand, urban environments. In the plan area, LRT operates with up to four-car trains on fixed rails in an exclusive right-of-way in some locations or mixed with street vehicle traffic in others. Light rail vehicles are typically driven electrically with power being drawn from an overhead electric line via a trolley or a pantograph. SacRT operates the only light rail service within the plan area. In general, LRT operates with a station spacing of 0.5 miles or more, and with maximum running speeds of about 55 miles per hour. The current system operated by SacRT is 43 miles and consists of Blue, Gold, and Green Lines. The Gold Line serves the US 50 corridor extending from downtown Sacramento to Folsom. The Blue Line serves the I-80 corridor northeast of downtown Sacramento and extends south of downtown to Cosumnes River College. The Green Line serves the Sacramento central city between Midtown Sacramento and the River District area just north of downtown.

Express Bus

Express bus service is typically operated over long distances with limited stops. Express buses typically travel on highways and freeways with extended "closed door" (i.e., no passengers boarding or alighting) distances. Operators providing express bus service to residents within the region, primarily to Downtown Sacramento, are:

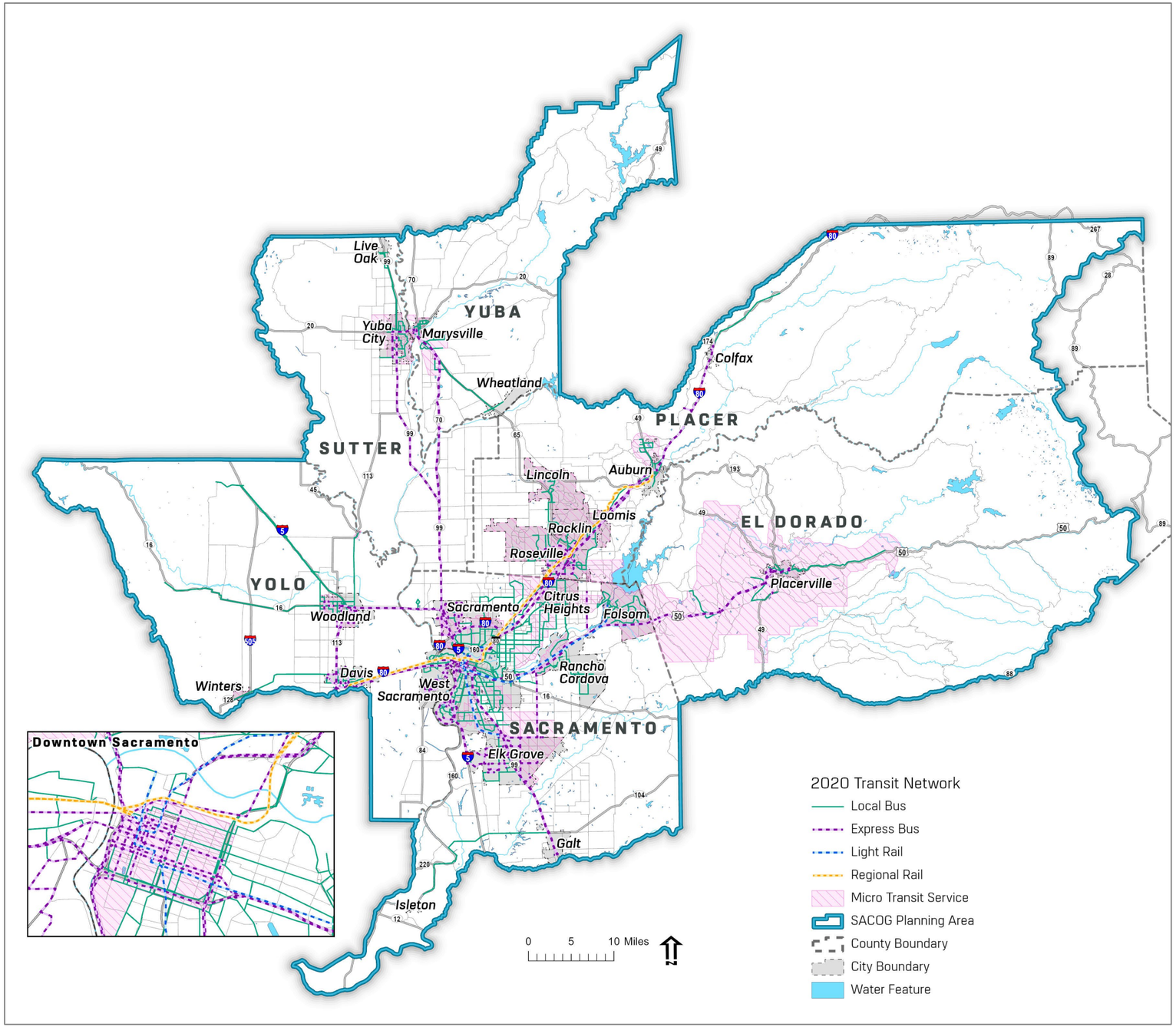
- Yolobus,
- Yuba-Sutter Transit,
- Placer County Transit,
- El Dorado Transit, and
- Roseville Transit.

Several transit operators based outside the region, including San Joaquin Regional Transit District, have express bus services that provide access to employment centers within the plan area.

Fixed-Route Bus

Fixed-route bus (or "local bus") service is the largest share of bus transit services. Buses stop frequently along a route that is typically several miles long. This is the most common type of bus service in the plan area. The following operators provide fixed-route service in the Sacramento or Yuba City/Marysville urbanized areas:

- City of Auburn – providing intra-city service;
- El Dorado County Transit – providing intra-city, intra-county, and commuter service to Sacramento;
- Folsom Stage Line – operated by SacRT, providing intra-city service within the City of Folsom;
- Placer County Transit with service connecting I-80 communities, commuter service to Sacramento and the Regional Transit light rail stop at Watt Avenue and I-80, and community service within the City of Lincoln;
- Roseville Transit – operated by the City of Roseville, providing intra-city and commuter services to Sacramento;
- SacRT – the largest fixed-route transit provider in the plan area, with extensive service coverage across urban Sacramento County;
- Unitrans – operated jointly by the City of Davis and the Associated Students of UC Davis, providing intra-city service in Davis and the UC Davis campus;
- Yolobus – serving Davis, Woodland, West Sacramento, Downtown Sacramento, the Sacramento International Airport, and rural Yolo County;
- Yuba-Sutter Transit – providing intra-city service in the Marysville/Yuba City area, intercity service to Live Oak, Wheatland and the Yuba foothills, and commuter service to Sacramento.



Source: Prepared by SACOG in 2025.

Figure 3.16-2 Existing Transit Network in the Plan Area

Transit service in the non-urbanized portion of Sacramento County includes South County Transit Link fixed route services linking the Cities of Elk Grove, Galt, Isleton, Lodi, Sacramento, and other Delta communities. Amador Transit provides additional fixed-route services that link Jackson and Sutter Creek in Amador County with Rancho Murieta, the 65th Street light rail station, and downtown Sacramento.

Community Shuttles

Community shuttles provide short-distance transit service within a small geographic area and are often called circulator, feeder, neighborhood, trolley, or shuttle services. Shuttles often have a lower fare than local fixed route service, frequently operate in a loop and connect to major routes for travel to more outlying destinations. SacRT, California State University, Sacramento, Rancho CordoVan, and North Natomas Jibe provide publicly operated shuttles in the plan area.

Paratransit Services

Paratransit services provide transportation service required by the Americans with Disabilities Act (ADA) of 1990 (42 USC Section 12101 et seq.) for seniors or individuals with disabilities who are unable to use fixed-route transit systems. Under federal law, paratransit services must be comparable in service-area coverage to fixed-route services in the same area. Paratransit services providers within the plan area include the following operators:

- Davis Community Transit - serving the City of Davis;
- El Dorado County Transit - serving El Dorado County;
- Paratransit Inc., the largest paratransit provider in the plan area - providing door-to-door share-ride, subscription, and intermittent transportation service within the Sacramento Metropolitan area;
- Placer County Transit - serving the Rocklin/Loomis area, Granite Bay, and along the SR 49 corridor;
- Roseville Transit Dial-A-Ride - serving the City of Roseville;
- SacRT Go Paratransit Services – serving the City of Sacramento and the SacRT service area:
- South County Transit - providing service in the Galt area;
- Yolo County Transportation District ADA Service - serving Woodland, West Sacramento, and intercity service throughout Yolo County and into Sacramento County; and
- Yuba Sutter Transit - serving the Marysville/Yuba City urban area.

Paratransit service is commonly operated as a form of demand responsive transit (DRT) as discussed below.

Demand Responsive Transit

DRT encompasses a variety of transit service products that provide on-demand service to passengers. Examples of DRT service types include point-deviation, route-deviation, and simple DRT (service area based) services. Micro-transit is a form of DRT. Typically, DRT requires a simple timepoint-based schedule or an advance bookings system to match passengers with vehicles. The City of West Sacramento and SacRT run microtransit DRT services through a mobility company that augment fixed-route transit or provide transit coverage in lower demand transit markets.

SacRT's service is called SacRT Flex Ride and was launched in January 2025 to provide service to eight different zones in the Sacramento area. The City of West Sacramento's service, Via Rideshare, was implemented in January 2024. Service hours are from 6:00 a.m. to 11:00 p.m. on weekdays, 9:00 a.m. to 11:00 p.m. on Saturdays, and 8:00 a.m. to 8:00 p.m. on Sundays.

El Dorado County offers microtransit service along SR 49 and US 50, centered around Placerville. The service is available from 7:30 a.m. to 5:00 p.m. on weekdays and from 8:00 a.m. to 5:00 p.m. on weekends.

Placer County offers micotransit service in four zones including on Highway 49, and in Rocklin, Loomis, Lincoln, and Granite Bay. Service is available from 6:00 a.m. to 7:00 p.m. on weekdays and 8:00 a.m. to 6:00 p.m. on weekends.

Yuba County offers microtransit service in the vicinity of Yuba City, Marysville, Linda, and Olivehurst. The service is available from 6:30 a.m. to 8:00pm on weekdays, with additional service until 9:30 p.m. on Fridays and from 8:30 a.m. to 5:30 p.m. on Saturdays.

BICYCLE AND PEDESTRIAN NETWORK

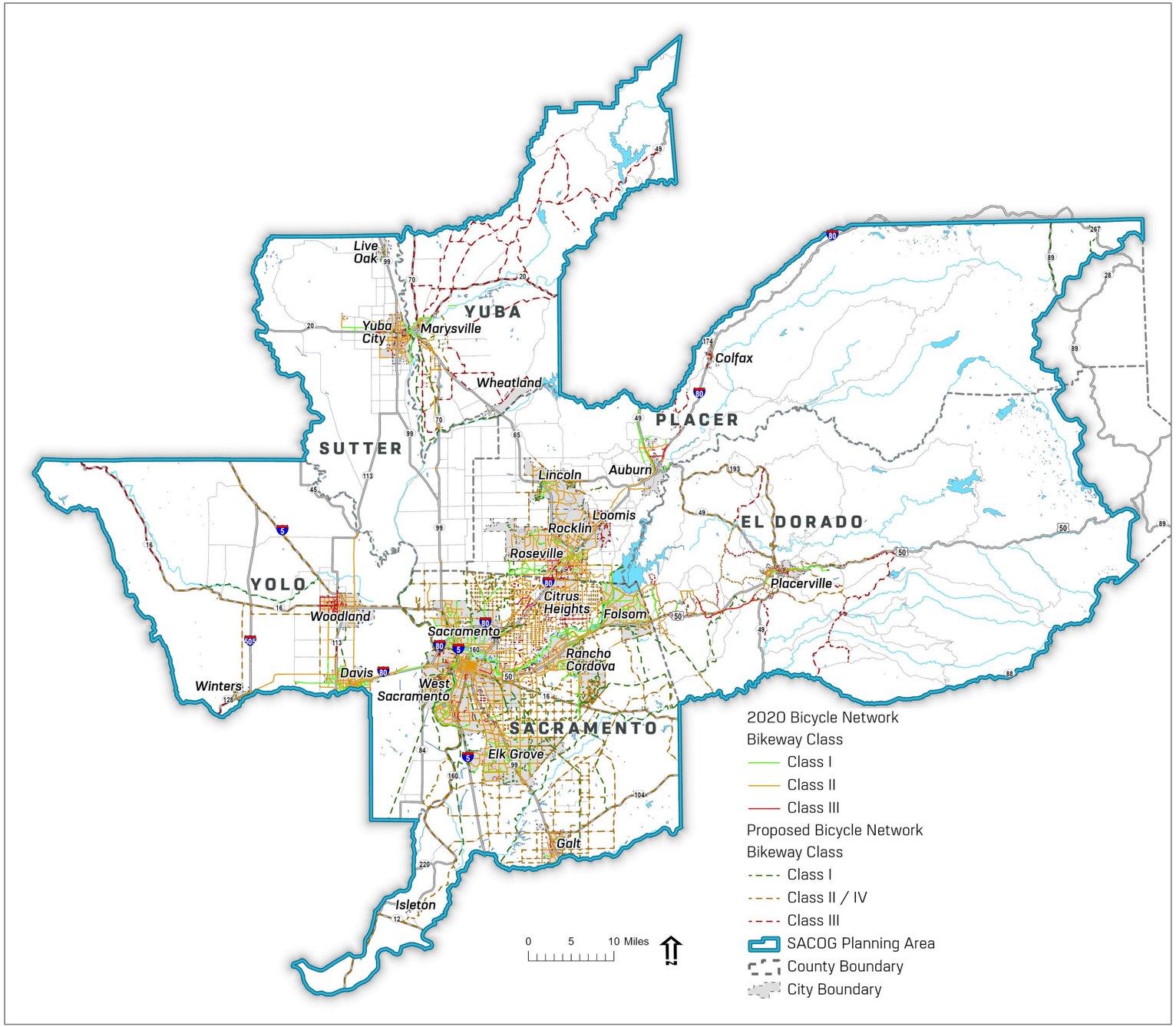
Bicycling and walking are active transportation modes. In addition to providing low-cost transportation, bicycling and walking contribute to community health and wellness and reduce congestion, regional GHG emissions, and other transportation-related pollutants. The SACOG region has a robust system of bicycling and walking facilities. A complete inventory is included in SACOG's 2022 Sacramento Regional Trail Network Action Plan. In 2020 (pre-pandemic) the bicycle and pedestrian system served over 11 percent of all trips in the plan area, described further below.

Bicycles

As of 2022, the Sacramento area bikeway network included over 495 miles of Class I multi-use pathways, 1,320 miles of Class II bike lanes, and 7 miles of Class IV separated bikeways (SACOG 2025). A highlight of the regional bikeway system is the 23-mile American River Parkway trail. This Class I multi-use trail extends from Folsom to downtown Sacramento along the American River and is heavily used for recreation and commute travel. Figure 3.16-3 shows the cross-section of each type of bicycle facility, as further defined below.

- Class I Shared Use Paths provide a completely separated right-of way for non-motorized users such as bicycles, pedestrians, joggers, and skaters, with crossflows by motorists minimized. Shared or multi-use paths are often the most popular type of facilities because of their exclusive use by active transportation modes and separation from vehicles. Prime locations for bike paths are areas such as power and other utility easements, canal banks, river levees, drainage easements, railroad or highway rights-of-way, or regional community parks.
- Class II Bike Lanes usually consist of a portion of a roadway that has been set aside by striping and pavement markings for the preferential or exclusive use of bicyclists. Bike lanes are intended to promote an orderly flow of bicycle and vehicle traffic. This type of facility is established by using appropriate striping, legends, and signs.
- Class III Bike Routes are facilities shared with motor vehicle traffic. Bike routes must be of benefit to the bicyclist and offer a higher degree of service than adjacent streets. They provide for specific bicycle demand and may be used to connect discontinuous segments of bike lanes. Bike routes may also be located on residential streets and rural roads. If the pavement width is sufficient and traffic volume/speeds warrant, an edge line may be painted to further delineate the bike route.
- Class IV Separated Bikeways (sometimes called Cycle Tracks), provide right-of-way for exclusive bicycle use adjacent to but separated and protected from vehicular traffic. Separation may be provided by grade differences, flexible posts, inflexible physical barriers, on-street parking, or other means. The barrier separation from vehicular traffic is intended to provide greater protection for cyclists using these bikeways.

In addition to paths, lanes, routes, and separated bikeways, secure and convenient parking and bus and rail bike accommodations are an important supporting part of regional bicycle infrastructure. The SacRT LRT system incorporates bicycle parking at 25 stations and bicycle lockers at 20 stations (SacRT 2025). SacRT also accommodates up to four bicycles inside each LRT car, and all SacRT buses have bicycle racks with capacity for two or three bicycles (SacRT 2025). Additionally, Amtrak Capitol Corridor trains include two "bike cars" that can accommodate dozens of bicycles per train (Amtrak 2019). Amtrak San Joaquin's service accommodates six bicycles per train (Amtrak 2025). Bicycle infrastructure is supplemented by regional shared micromobility options contracted by SACOG. Currently, there are fleets of e-bikes and e-scooters in the cities of Sacramento and West Sacramento.



Source: Prepared by SACOG in 2025.

Figure 3.16-3 Existing Bicycle Network in the Plan Area

Pedestrians

Pedestrian facilities include multi-use paths, sidewalks, crosswalks, walkways, stairs, ramps, and building entranceways. By far, sidewalks are the most common type of public pedestrian facility and exist along streets in most of the urbanized areas of the plan area. Exceptions generally include rural areas or still developing areas where gaps in sidewalks occur due to undeveloped parcels or low potential for walking. The region has made a concerted effort over the past few years to improve the pedestrian system and continues to focus on the following types of improvements in modifying and expanding the system:

- improved signals and signal timings to better accommodate pedestrians,
- improved accessibility to meet ADA requirements including curb cuts, wheelchair access, connected sidewalks, and surface overlays, and
- improved pedestrian safety at crossing locations, including high visibility sidewalks along all sides of intersections, advanced signing to alert drivers to pedestrians, pedestrian refuge islands and medians, and curb extensions to reduce crossing distances (SACOG 2015).

AVIATION

The plan area contains 17 public use airports. While most of these are smaller airports for general aviation, the region also hosts Sacramento International Airport (commercial passenger and cargo service) and Mather Airport (commercial cargo service). Additionally, Beale Air Force Base is located within the plan area, approximately 8 miles east of Marysville. Figure 3.16-4 shows the general aviation airports in the plan area.

Sacramento International Airport is owned by the County of Sacramento, occupies approximately 6,000 acres, and has two 8,600-foot runways. The airport is bordered by I-5 to the south and is also located 8 miles from I-80 and 5 miles from CA 99. The airport served 13 million annual passengers in 2024 and offers 180 daily nonstop flights on 12 domestic and international carriers (Sacramento County 2025).

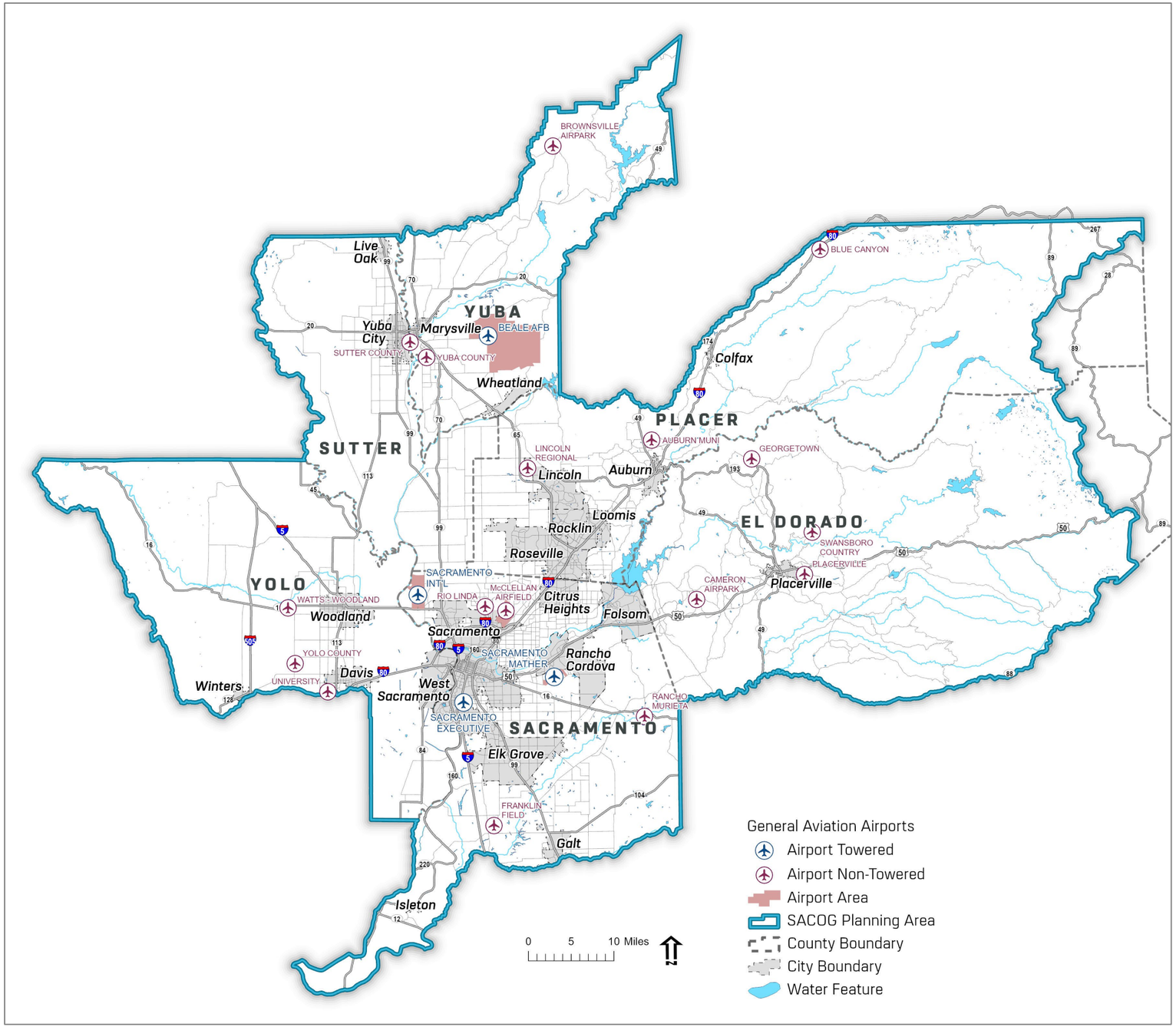
OTHER TRAVEL OPTIONS

Several additional options for travel have been emerging around the nation over the last decade, including Sacramento: transportation network companies (TNCs) provide ride-sharing services (e.g. Uber, Lyft), food delivery services (e.g., Postmates, Grubhub, Uber Eats), car-sharing services (e.g. Zipcar, Turo), bike- and scooter-sharing (e.g., Lime and Bird), parking-space-finding applications (e.g., SacPark, ParkMobile), and demand responsive transit (e.g., Via Rideshare and SacRT Flex).

Other changes that influence travel include:

- Substitution of internet shopping and home delivery for some shopping or meal-related travel.
  - The 2018 SACOG Regional Household Travel Survey (HTS) showed that adults reported receiving a home delivery of a package on 17 percent of the travel days in the survey—and an additional 4 percent received packages at work, food deliveries at home, etc. How these percentages compared to earlier years is not known.
  - The National Household Travel Survey (NHTS) showed that the number of online purchases with home delivery doubled between 2009 and 2017, from about 2.5 to 4.9 per household per month (FHWA 2018).
  - Comparisons of 2017 to 2009 NHTS data show that nationally, non-work trips per household declined by 11 percent. Most of that decline is attributed to lower rates of shopping trips and other family-related errands (FHWA 2018).

- Substitution of telework for commute travel.
  - The 2018 SACOG HTS showed that 17 percent of the respondents reported working at home at least 1 day per week. The 2020 pandemic may have increased the rate of remote work since this study.
- New travel modes and choices
  - TNCs, car share, bike share, scooter share, and on-demand micro transit have increased the travel options available to travelers in the SACOG region and have contributed to changes in traditional travel demand relationships. The current share of resident trips served by TNCs is less than 0.25 percent, and future growth depends on TNCs developing a sustainable business model.
- Automation of vehicles
  - Both passenger vehicles and commercial vehicles and trucks are evolving to include more automation. Research, development, and deployment testing is proceeding on fully autonomous vehicles (FAVs), for which no human driver would be required, and the vehicle itself can navigate the roadways to take people or goods where they need to go. Forecasts of how quickly research, development, and deployment testing will transition to full deployment and mass marketing of FAVs vary widely both on the pace of the transition, and the market acceptance of fully autonomous operation. More uncertainty exists for the behavioral response to FAVs. In terms of impact on the transportation system and the environment, a scenario of concern would be one in which FAVs are privately owned, but the automated function of the vehicles would entice users to travel more. Examples of this phenomenon could include:
    - Vehicles are repositioned to serve different members of a household (e.g., have a car drop a worker at their workplace, then drive back home empty to serve another trip, such as a student going to school). The repositioning of driverless vehicles could add significantly to traffic volumes and VMT.
    - The time spent in a vehicle is re-evaluated by travelers, resulting in an increase in the willingness to make longer trips. For example, if a person could read or do work in a vehicle instead of focusing on driving, they might be willing to commute longer to work. Conversely, a worker who prefers to live in a rural area but is unwilling to drive far enough to act on that preference in a conventional vehicle, may be willing to do so in an FAV.
    - There may be an increasing willingness to drive more to avoid parking costs or tolls. For example, a person going to a sporting event in an area that charges for parking may use an FAV to be dropped off at the venue, with the FAV repositioning to an area that does not charge for parking.
- Connected vehicles
  - A connected vehicle (CV) can communicate wirelessly with its surroundings, including other vehicles, bicyclists, pedestrians, roadway infrastructure (e.g., traffic signals, toll facilities, traffic management facilities), and the internet. CVs may result in reductions in collisions and congestion, and greater overall network performance optimization.



Source: Prepared by SACOG in 2025.

Figure 3.16-4 General Aviation Airport in the Plan Area

GOODS MOVEMENT

The major urbanized areas of the Sacramento region require millions of tons of goods each year to maintain economic activities and quality of life. Further, the nature of travel demand is shifting—more goods are being delivered directly to the home due to the convenience of internet shopping. Wholesale and retail trade, transportation, and manufacturing support over 215,000, or 19 percent of jobs in the plan area (US Census Bureau 2022). Located at the center of the Central Valley, a major agricultural region, the transport of agricultural commodities from farm to market is also a vital function for the regional economy. Therefore, freight transportation is essential for the region's consumers and businesses.

Goods are transported by rail, air, truck, auto, and ship into, out of, and through the plan area, although pipelines also carry products such as fuel. An international port of entry is also located at the Sacramento International Airport (US Customs and Border Protection 2024). The goods movement system includes not only highways, railroads, sea lanes, and airways, but also truck terminals, railyards, warehousing, and other facilities serving these transportation routes. For goods traveling within the plan area, nearly all (99.8 percent) freight tonnage is carried by truck, and the remainder by other modes. For goods originating or destined for the region, but with the other end of trip outside the region, 27 percent of the tonnage is carried by trucks, and the remainder by other modes. For almost all goods delivered to final destinations in the plan area involve trucks or autos. Table 3.16-1 contains the detailed breakdown of tonnage by mode.

Table 3.16-1 Mode Share by Tonnage of Goods Transported in Region

Mode	All Goods To, From Region	Goods Within Region	Goods to District from Points Outside Region	Goods from District to Points Outside Region
Truck	88.3%	99.8%	71.9%	93.2%
Rail	1.4%	0.0%	3.2%	1.0%
Water	0.0%	0.0%	0.0%	0.0%
Air (including truck-air)	0.1%	0.0%	0.1%	0.1%
Multiple modes & mail	2.9%	0.2%	4.7%	5.2%
Pipeline	7.4%	0.0%	20.1%	0.6%
Other and unknown	0.0%	0.0%	0.0%	0.0%
Total	100%	100%	100%	100%
Total Tonnage (in millions)	91.4	38.8	33.1	19.5

Notes: Region based on Zone 062 represents Sacramento-Roseville, CA CFS Area

Source: Data compiled by SACOG, May 2025. Based on FAF data dashboard at https://faf.ornl.gov/faf5/dtt_total.aspx.

An important change in freight movement over the past few years has been the increasing amount of internet shopping. The combination of internet shopping and the e-commerce system that supports it has altered traditional travel demand. One of the reasons people travel is to obtain goods and services. Today, goods and services are routinely delivered directly to users including food delivery within minutes of ordering and commerce from many major retailers within two-hour, same-day, next-day, and two-day shipping windows. The number of daily freight deliveries per person in the United States has increased from about 0.12 in 2009 to 0.25 in 2018 (TIME 2018). In response to growing demand and faster delivery times, delivery vehicle options have expanded to include passenger cars and experimentation with drones and small robot vehicles operating on sidewalks.

Medium and Heavy-Duty Trucks

One of the key components of the region's goods movement system is the fleet of medium- and heavy-duty trucks, defined as cargo-carrying vehicles with a gross weight rating in excess of 8,500 pounds (by the US Environmental Protection Agency) or 10,000 pounds (by the FHWA) (DOE 2012). Trucks provide a vital link in the distribution of all types of goods between the region's airports, seaport, railroads, warehouses, factories, farms, construction sites and stores.

The industry uses the public highway system for over-the-road and local service. I-80 is the major east-west freeway through the Sacramento region, not only facilitating goods movement to and from the region but also connecting the ports and industry of the San Francisco Bay Area to much of the rest of the country. I-5 and SR 99 are the two major north-south corridors serving the region, facilitating goods movement through the Central Valley and connecting the Sacramento region to the rest of the state, the Pacific Northwest, and Mexico and Canada. Figure 3.16-5 shows the Goods Movement Routes for trucks in the plan area.

While trucks are essential to the goods movement for the region, they also contribute to freeway and highway congestion, and contribute to air pollutants and GHG emissions.

Passenger Vehicles Used for Goods Movement

To help complete the last mile of freight delivery, especially to individual homes, internet shopping businesses such as Amazon have developed networks that rely on passenger vehicles and light-duty trucks and vans. As described above, the increase in deliveries to homes occurred at the same time that trips from home for shopping, recreation, or other purposes declined. Whether the declines offset the new increases in passenger vehicle trips for goods delivery is uncertain; however, one estimate of passenger vehicle VMT changes in California prepared by the CARB estimated that VMT per capita has increased steadily since 2011, with statewide VMT increasing 4 percent above 2001 levels, as of 2019 (CARB 2022c). This increase may be due, in part, to increased delivery of goods in passenger vehicles but other contributors could be higher levels of visitors in California, more passenger vehicle drivers, and/or lower fuel prices.

Rail Transport

The Sacramento region is served by both major railroads and short line railroads, shipping products such as motor vehicles, lumber, chemicals, petroleum, agricultural products, cement, and aggregate. These railroads shipped 104 million tons of freight into California and 57 million tons of freight out of California in 2022 (AAR 2025).

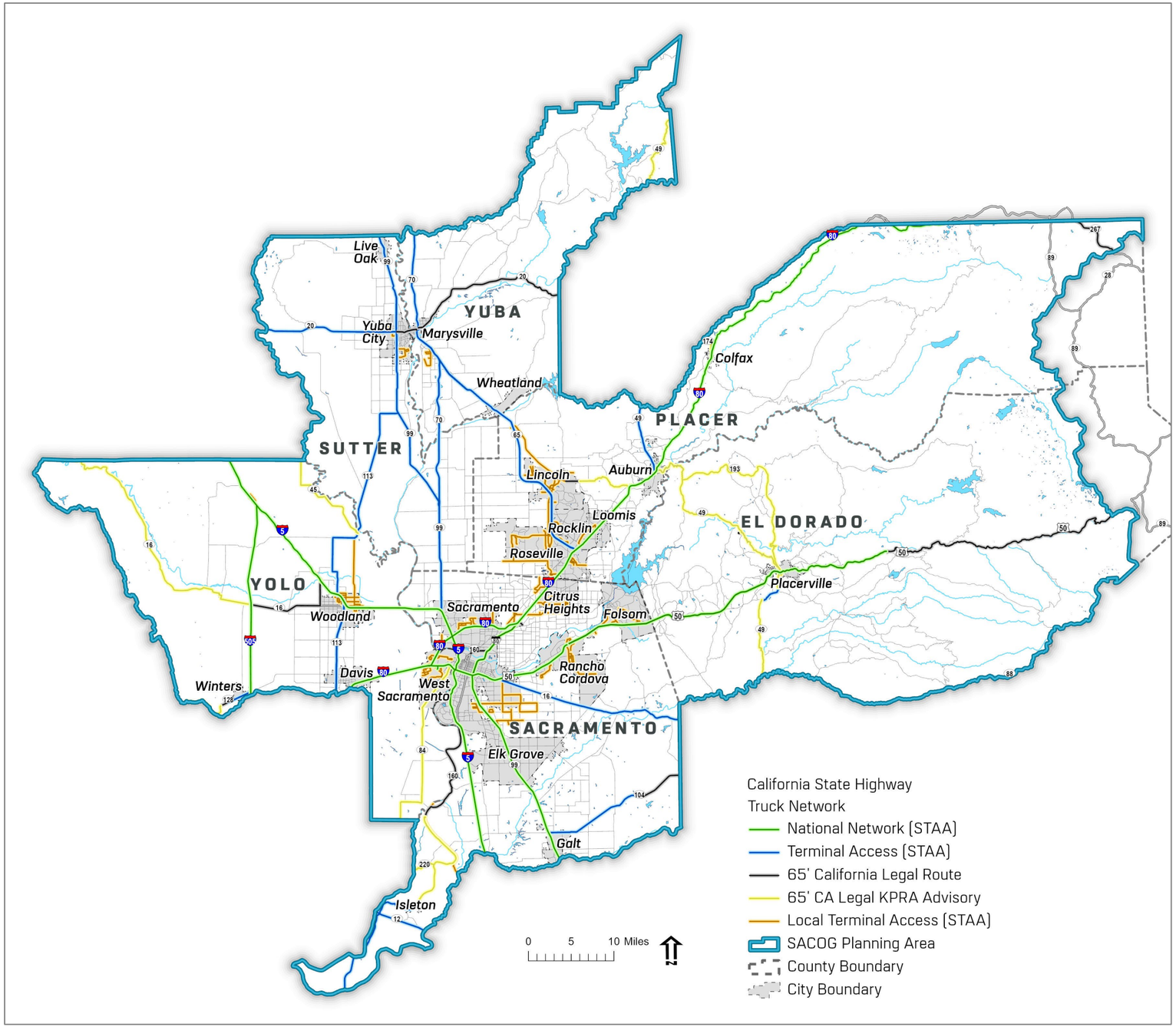
The Union Pacific Railroad (UPRR) is the largest Class 1 railroad serving the region. UPRR links the Sacramento area to the rest of California and other United States regions, Mexico, and Canada, both directly via its major north/south and east/west lines passing through the region and via their connections with other railroads. The UPRR's Davis Yard, located in Roseville, is the railroad's primary hub for storing and routing freight. The yard occupies 915 acres and includes a repair facility. An additional Class 1 railroad, BNSF Railway, also operates in the region through UPRR track rights (BNSF Railway 2024).

The Sierra Northern Railway is a short line railroad with 17 miles of track between West Sacramento and Woodland. The railway connects customers to the UPRR and BNSF railways via its interchange location in West Sacramento. The railway also serves the Port of Sacramento. The railway serves both freight and excursion trains (via the Sacramento River Train) customers (SNR 2015).

Genesee & Wyoming owns the California Northern Railroad, which operates 282 miles of track in Northern California (AAR 2025). This short line railroad connects customers in Northern California to Sacramento and the San Francisco Bay Area via links to the UPRR in Davis. The railway serves freight customers (GWRR 2024).

Patriot Rail operates the Sacramento Valley Railroad, which supports 7 miles of tracks within McClellan Business Park, where it interchanges traffic with the UPRR and BNSF. The railway serves freight customers (Patriot Rail 2024).

In addition to shipping other agricultural, commercial, and industrial goods, the region's rail network also handles crude oil shipments. (See Section 3.8, "Hazards and Hazardous Materials," for an evaluation of the hazards associated with rail transport of hazardous materials.)



Source: Prepared by SACOG in 2025.

Figure 3.16-5 Goods Movement Routes in the Plan Area

Air Freight

Air freight also arrives and departs the plan area through two major cargo airports, Sacramento International and Mather. In fiscal year 2023, Sacramento International handled 70,000 tons of freight and Mather handled 31,700 tons of freight. Additionally, Sacramento International handled 6,600 tons of airmail in fiscal year 2023 (Sacramento County 2024).

Maritime Port

The inland Port of West Sacramento, managed by the City of West Sacramento, is located near the center of the Sacramento metropolitan area and, thus, also the Central Valley agricultural region. The port is connected to Suisun Bay and San Francisco by the 40-mile long, 30-foot deep Deep Water Ship Channel (CAPA 2025). The port is the primary handler of the region's rice exports and handles other agricultural and industrial bulk products. In 2020, the port transported 1.2 million tons of cargo (LAO 2022).

TRANSPORTATION PERFORMANCE MEASURES

Regional conditions for select performance indicators form the basis for the transportation impacts analysis presented in this EIR. These indicators include VMT, shares of transit and non-motorized trips, transit productivity, and miles of bicycle and pedestrian routes. These indicators have been important performance measures throughout the development of the 2025 Blueprint, and all relate directly to the performance of the region's transportation system. The discussion below includes historical context on travel trends in the plan area related to VMT and mode split shares. More details on each indicator are included in the impact analysis section. In addition to these metrics, information is summarized below about the aviation and goods movement components of the transportation system.

Vehicle Miles Traveled

A "VMT" is one vehicle traveling on a roadway for 1 mile. Regardless of how many people are traveling in the vehicle, each vehicle traveling on a roadway within the Sacramento region generates one VMT for each mile it travels. For the purposes of this EIR, VMT is estimated and projected for a typical weekday. The efficacy of this measure is a result of several factors:

- VMT is relatively easy to measure by counting traffic on roadways at different locations. It is one of the few measures of transportation performance that has been consistently and comprehensively monitored and documented over time in the plan area.
- VMT bears a strong and direct relationship to vehicle emissions, although this relationship is becoming more complex as vehicular technologies evolve. State and federal policies pertaining to vehicle efficiency and formulation of vehicle fuels suggest that on a per VMT basis, emissions for most pollutants and GHGs will decline relative to today. However, even with these per VMT improvements due to fuel and vehicle technology changes, lower VMT will mean lower emissions.
- VMT can be influenced by policy in a number of different ways. By providing more attractive alternatives to driving alone, VMT can be reduced by shifting from vehicle to non-vehicle modes (i.e., from a car trip to a bike or walk trip), or from low occupancy to HOVs (i.e., from a single-occupant vehicle trip to a carpool or transit trip). VMT can be influenced by land use patterns as well. A better mix of residential, employment, education, and service uses in an area can allow people to accomplish their daily activities with less driving, and consequently less VMT. Locating land uses in closer proximity to each also makes walking and bicycling more viable, while also making transit more effective.

As displayed in Table 3.16-2, VMT per capita decreased by 16 percent from 2019 to 2022 while the region's population continued to increase for the same period (2.1 percent).

Table 3.16-2 Existing Average Daily VMT by County

County	2019 Daily VMT[1] (thousands)	2023 Daily VMT[1] (thousands)	Change in VMT between 2019 and 2023 Changes
El Dorado[1]	4,324	3,718	-14.0%
Placer[1]	9,986	9,048	-9.4%
Sacramento	36,391	31,734	-12.8%
Sutter	2,830	2,510	-11.3%
Yolo	6,551	5,504	-16.0%
Yuba	2,080	2,095	0.7%
Region	62,162	53,351	-14.2%
Pop. (thousands)[2]	2,455	2,538	2.1%
VMT per Capita	25.3	21.0	-16.0%

[1] Includes VMT from all sources (household-generated, commercial, and external) on all roadways within the SACOG region. Estimates and forecasts from SACSIM regional travel demand model.

[2] Only the portions of Placer and El Dorado County outside the Tahoe Basin are reported. SACOG adjusted the full-county data reported in CPRD reports.

Source: Data compiled by SACOG, Dec 2024. From "California Public Road Data Reports" assembled by SACOG 2025.

Travel by Bicycling, Walking, and Transit

Table 3.16-3 provides data and estimates on travel by walking, biking, and transit in the region. The commuter travel estimates are survey data from the American Community Survey. These data show that mode shares are projected to remain relatively stable from 2020 to 2050.

Table 3.16-3 Weekday Person Trips and Mode Shares [1]

Mode of Travel[2]	2020	2050
Commuting Person Trips		
Total Trips	1,059,600	1,163,800
Drive-Alone Trips	661,800	733,700
Carpool Trips	284,300	294,000
Public Transit Trips	10,400	14,500
Bicycle Trips	21,000	29,600
Walk Trips	68,200	76,300
All Travel		
Total Trips	3,368,900	4,069,300
Drive-Alone Trips	1,260,600	1,544,300
Carpool Trips	1,718,700	2,003,600
Public Transit Trips	48,600	86,900
Bicycle Trips	68,100	97,900
Walk Trips	233,900	293,300
Drive-Alone Share	37.4%	38.0%
Carpool Share	51.0%	49.2%
Public Transit Share	1.4%	2.1%
Bicycle Share	2.0%	2.4%
Walk Share	6.9%	7.2%

[1] All estimates from SACSIM travel demand model. Trips generated from SACSIM tour outputs for comparison with ACS commuter shares.

[2] SACSIM mode share calibrated from SACOG regional 2018 Household Travel Survey.

Source: Data provided by SACOG 2025.

Table 3.16-4 provides pre-pandemic, 2020 data on mode of commute for residents in the SACOG region. The mode of travel varies by area where residents live. For example, the non-auto share of person trips (including every mode, except driving alone or carpooling) accounts for nearly 21 percent of all trips for residents of Center and Corridor Communities, 13 percent for Established Communities, but only 8 percent and 6 percent, respectively, for residents of Developing Communities and Rural Residential Communities. The majority of this difference is accounted for by the walk mode, which accounts for approximately 14 percent of person trips in Center and Corridor Communities and 9 percent of trips in Established Communities, and roughly 6 and 5 percent of trips in Developing Communities and Rural Residential Communities, respectively. Some of the factors related to these differences are discussed in greater detail in this section in the "Methodology," but the key factors are more activities clustered closer to residences in Center and Corridor Communities, and street patterns and pedestrian facilities (e.g., sidewalks) are more supportive of walking and biking. Also, transit service is more prevalent in Center and Corridor Communities.

Table 3.16-4 Existing Person Trips by Mode of Travel

	Community Type				
Land Use / Mode	Center and Corridor	Established	Developing	Rural Residential	Regional Total
Person Trips					
Drive Alone	446,811	3,141,517	128,763	242,968	4,033,801
Carpool	439,032	3,294,412	156,108	226.996	4,191,694
Transit	30,346	67,937	707	717	99,927
Bike	39,264	157,698	4,005	4,955	207,483
Walk	158,109	672,473	19,474	22,647	879,757
Other	10,655	48,493	1,600	1,844	63,195
All Modes	1,124,227	7,382,530	310,657	500,127	9,475,857
Mode Share					
Drive Alone	39.7%	42.6%	41.4%	48.6%	42.6%
Carpool	39.1%	44.6%	50.3%	45.4%	44.2%
Transit	2.7%	0.9%	0.2%	0.1%	1.1%
Bike	3.5%	2.1%	1.3%	1.0%	2.2%
Walk	14.1%	9.1%	6.3%	4.5%	9.3%
Other	0.9%	0.7%	0.5%	0.4%	0.7%

Source: All estimates from SACSIM travel demand model provided by SACOG in 2025.

Aviation

An important air transportation performance measure is passengers served. In 2024, Sacramento International Airport enplaned 6,810,327 passengers and deplaned 6,490,086 passengers (Sacramento County 2024); 399,378 of these passengers were from international flights, a 35 percent increase since 2018.

3.16.3 Environmental Analysis

METHODOLOGY

Travel Demand Forecasting Model

SACOG utilized its regional travel demand model to compare the 2025 Blueprint for 2050 conditions to 2020 conditions, for the purposes of forecasting travel demand. SACOG's primary model is the Sacramento Regional Activity-Based Simulation Model or "SACSIM." SACOG periodically updates and improves SACSIM, and releases versions of the model and data for use by member agencies when the MTP/SCS is adopted, with versions numbered

according to the year the version was finalized. SACSIM19 was used for the 2020 MTP/SCS. SACSIM23 was used for the analysis of the 2025 Blueprint.[1]

SACSIM includes four sub-models for predicting travel demand. The major sub-model is "DAYSIM," which is an advanced-practice activity-based tour sub-model for predicting household-generated travel[2] [3]. DAYSIM is a demand micro-simulation, which represents travel activities as tours, or series of trips, connecting the activities a person engages in during a normal day. DAYSIM allows more detailed representation of key factors influencing household-generated travel, such as detailed characteristics of land use in the region, age of residents, household income, cost of fuel, and other factors.

SACSIM also includes a more conventional, state-of-practice sub-model for predicting commercial vehicle travel. Two classes of commercial vehicles are modeled: two-axle commercial vehicles, and three-plus-axle commercial vehicles. Two-axle commercial vehicles include a wide range of vehicles, ranging from a passenger vehicle, which might be used to transport a computer repair person and their tools and equipment to an office to perform a repair, to a relatively small truck delivering produce to a restaurant or store. Three-plus-axle commercial vehicles also include a wide array of vehicles, ranging from medium-sized delivery trucks to large, five-axle tractor-trailer combinations. The common element tying these vehicles together is that they are used to transport goods and services, and are not used for personal (household-generated) travel.

SACSIM also includes state-of-practice sub-models for predicting air passenger ground access to the Sacramento International Airport, and for predicting external travel (including travel by residents of the region to locations outside the region, residents outside the region traveling to locations within the region, and travel that goes through, but does not stop within, the region).

Vehicle or transit passenger trips are assigned to detailed computer representations of the region's highway and transit networks using state-of-practice software and programs. The resulting assignments are used for evaluation of VMT on roadways, congested travel on roadways, and travel on the region' transit system.

The analysis period of SACSIM is a "typical weekday." A typical weekday is intended to represent weekday conditions during a non-summer month (i.e., a time period when most workers are at work, rather than on vacation, and when schools are normally in session). Where annual or other time periods are required, typical weekday estimates of travel are scaled up to represent those time periods.

SACSIM is adjusted to capture observed travel behavior in the base year (2020). The process of measuring the degree to which the model captures observed travel in the base year is known as "validation." This step is undertaken in compliance with guidelines provided by the CTC (CTC 2024). In addition to validation, sensitivity testing is performed to ensure that SACSIM is appropriately sensitive to key factors affecting travel (e.g., cost of travel, household income, age).

For impact analysis under CEQA, all impacts and thresholds are defined as differences or changes between existing conditions and the 2025 Blueprint horizon year (2050). The travel demand forecasting in the 2025 Blueprint uses a 2020 baseline because 2020 is the most recent year for which comprehensive transportation and travel data are available for the plan area. While the existing conditions baseline for the purposes of CEQA analysis is the date of the NOP publication, January 2025, the analysis of transportation impacts in this chapter relies on data from the year 2020 because that is the most recent year for which reliable data is available. If base year data are available for a performance measure, SACSIM estimates of baseline-to-2050 change are applied to the baseline observed data to estimate 2050 totals. If observed data for baseline are unavailable for a performance measure, SACSIM estimates are used directly to estimate baseline and 2050 totals.

[1] Model Documentation for 2025 Blueprint is available at Sacramento Area Council of Governments (SACOG) (2025). *SACSIM23 Travel Demand Model Documentation*. Retrieved from https://www.sacog.org/planning/data-resource-center/travel-demand-model/travel-model-documentation/sacsim23.

[2] National Academies of Sciences, Engineering, and Medicine. 2014. Activity-Based Travel Demand Models: A Primer. Washington, DC: The National Academies Press. https://doi.org/10.17226/22357.

[3] Resource Systems Group, Inc. (RSG). DaySim Activity-Based Model. GitHub repository: https://github.com/RSGInc/DaySim.

Potential Limitations to Travel Demand Model

While the SACSIM model ranges from state-of-practice to advanced-practice in travel modeling, travel behavior and the transportation systems are changing quickly in response to emerging trends, new technologies, and different preferences. Some of the new travel options and technologies emerging in the SACOG region are discussed above. Additionally, information about how technology is affecting travel is accumulating over time.

SACSIM does not explicitly capture the above-mentioned new modes of travel and emerging trends in travel behavior because future deployment levels for new modes of travel are unknown. Through validation of the model to 2020 conditions, the cumulative effect of the new modes and changes are reflected in the resulting travel demand estimates, but the underlying behavioral impact of the modes are not modeled.

SACOG is participating in some of the ongoing monitoring and research on the deployment and impact of new modes of travel and will incorporate analysis findings related to individual and household travel behavior into later versions of SACSIM.

Treatment of Travel Induced by Addition of New Roadway Capacity

Research suggests that the provision of new roadway capacity, all other things being equal, can itself result in generating additional vehicle travel. This phenomenon is often labeled "induced travel," and is in reality composed of many different effects. Those effects fall into two general categories:

- Short-term effects—changes in the near term to individual and household travel behavior due to a new or expanded roadway. All of the short-term effects are the result of travel on the new or expanded roadway being faster or more reliable than the prior condition:
  - Driving slightly out of one's way in order to use a new facility, compared to prior routes;
  - Shifting trips made by walking, biking, transit, or some non-private-vehicle mode to a private vehicle; or
  - Making more trips using a vehicle compared to the prior condition.
- Long-term effects—changes in long-term individual or household choices, or causing new growth and development in areas where options for driving are few, or where the density and mix of uses require longer-than-average (regional) vehicle trips:
  - An individual deciding to relocate his or her place of residence from an area where lower-than-average vehicle use is required, to an area where higher-than-average vehicle use is required, simply because new roadway capacity makes the move more attractive.
  - A property owner or developer deciding to build in an area where higher-than-average vehicle use is required for future residents, simply because new roadway capacity makes that area more marketable and valuable to future homebuyers.

The analysis of the 2025 Blueprint using the SACSIM model also includes an analysis of the potential for induced travel, both for short-term and long-term effects. The short-term effects are captured directly in the model itself, since (a) the impact of new capacity on vehicle travel speed is captured in the model, and (b) the impact of speed of travel on roadways affects the frequency of trip-making, mode of travel, and travel routing. Testing of the ability to capture long-term induced travel effects is beyond the capability of the SACSIM model alone because the travel model itself is not integrated with a spatial economic or "land use" model. However, the SACSIM model, in combination with the process used for developing the land use forecast, and the process used for identifying roadway capacity projects through an iterative approach, does reasonably capture the effects of the land development and transportation project deployment that, based on the historical research focused on similar development in the 1990's and 2000's, resulted in estimates of the induced travel effects in use today. The growth allocation includes land uses in areas that are above regional average in VMT generation, especially in areas at the edge of the region. The transportation project list includes new roadway capacity to accommodate that growth. An elasticity analysis of the base year to future year changes in the 2025 Blueprint was used as a reasonableness check of the SACSIM modeling results, including the long-term induced travel effects. Testing of both the short-term and long-term effects is provided in Appendix F of the 2025 Blueprint (Model Documentation).

Key Performance Measures and Policy Objectives for Assessing the Transportation Impacts of the 2025 Blueprint

The impact analysis considers the roadway, transit, bicycle, pedestrian, aviation, agricultural, and goods movement components of the regional transportation system. Quantitative analysis focuses on the following performance measures derived from the forecasting results of the SACSIM model.

- household-generated VMT and total VMT;
- number of person trips made by different non-private-vehicle modes (bicycling, walking or public transit); and
- number of transit passenger boardings and amount of transit service provided.

In addition to these quantitative measures, qualitative analysis is included to address the overall connectivity of the pedestrian and bicycle system, the ability to move agricultural goods and farm products on roadways, aviation, goods movement, construction activity associated with 2025 Blueprint projects, and safety. Each of the quantitative and qualitative measures are described in more detail below. An increase to any of the following indicators would constitute a significant impact.

VMT per Capita

The basic measure of the amount of vehicle travel generated by the project is VMT, defined and described above. Two slightly different measures of VMT are commonly used in analysis: household-generated VMT and total VMT. Both measures are derived from SACSIM model outputs.

Household-generated VMT is the VMT generated by residents of the SACOG region, for all travel within the region for all purposes (e.g., going to/from work, to/from school, shopping, personal business, social/recreational). Because this travel is estimated using an advanced-practice travel demand micro-simulation, it is possible to tabulate all the household-generated VMT by tracing the trips of each resident of the household throughout the day (e.g., trips the residents make away from the home, such as trip from work to a restaurant for lunch). In general, about 75 percent of all VMT is household-generated (i.e., created by residents of the SACOG region). This capability is unique to travel demand micro-simulation models and allows for geographic comparisons of VMT generation by households, and evaluation of impacts for sub-areas within the region.

Total VMT includes household-generated, plus VMT from all other sources. SACSIM adds commercial vehicle, airport passenger ground access, and external travel to household-generated travel to estimate total VMT.

For the reasons described above, household-generated VMT is the measure used in the analysis of impacts for the plan. Although the absolute amount of household-generated VMT is reported, the impact analysis is based on VMT normalized to population as "per capita" rates. This metric provides a measure of travel efficiency and helps depict whether people are traveling more or less by vehicle over time. A per capita decline in VMT indicates that the transportation network is operating more efficiently, and that people have more travel choices.

State CEQA Guidelines Section 15064.3(a) notes that VMT are the most appropriate measure of transportation impacts, where "vehicle miles traveled," or VMT, refers to the amount and distance of automobile travel attributed to a project. The guidelines also indicate that the effects of a project on transit and non-motorized travel may also cause transportation impacts. State CEQA Guidelines Section 15064.3(b) provides the criteria for analyzing and determining transportation impacts, as follows:

1. Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
2. Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a

programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.

3. Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

4. Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

The criteria in Section 15064.3(b) are primarily directed toward the assessment of project-level impacts, whereas the 2025 Blueprint is a regional long-range plan integrating a region-wide suite of projects, programs, and policies, and the 2025 Blueprint is analyzed using regional models.

While VMT has been established as the new measure of transportation impacts under SB 743 (see Section 3.15.2, "Regulatory Setting," for further discussion of SB 743), CEQA allows lead agencies to determine the methodology for evaluating VMT (CEQA Guidelines Section 15064.3(b)(4)) and to establish a threshold of significance (CEQA Guidelines Section 15064.7). The State has developed resources to help lead agencies evaluate impacts and establish impact thresholds under the new VMT standard. Key guidance relevant to transportation impacts and VMT include the California OPR Technical Advisory (December 2018) and the CARB 2022 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals (CARB 2022a).

OPR's Technical Advisory provides guidance on determining significance thresholds and assessing VMT. The Technical Advisory is directed to specific projects by project type (i.e., residential, retail, office, etc.) and local plans (i.e., general plans), and includes recommendations for evaluating transportation impacts. OPR uses the Statewide GHG targets established through 2050 by State laws and executive orders as the basis for its recommended VMT significance thresholds. For project-level analyses, OPR recommends that "a per capita or per employee VMT that is 15 percent below that of existing development may be a reasonable threshold" based on their review of relevant research on project-level impact mitigation measures. The OPR guidance addresses general plans (and lesser area plans), but not regional plans: "A general plan, area plan or community plan may have a significant impact on transportation if proposed new residential office, or retail land use would, in aggregate, exceed the respective thresholds" for the project level thresholds, a per capita VMT that is 15 percent below existing development.

In the 2022 Scoping Plan, CARB describes VMT estimates associated with a scenario that assumes a combination of vehicle technologies, vehicle fuels, and slower VMT growth that would achieve the Statewide 2050 GHG emission reductions targets (80 percent below 1990 levels by 2050, as established under EO S-03-05). Based on the scenario assessment, CARB finds that per capita VMT needs to be 16.8 percent lower than existing levels (Statewide 2015-2018 average VMT per capita) by 2050, and for overall vehicle travel, per capita VMT would need to be 25 percent below 2019 levels by 2030 and 30 percent below 2019 levels by 2045 (CARB 2022a).

Therefore, in the following evaluation, the plan would be considered to conflict or be inconsistent with Section 15064.3 of the State CEQA Guidelines if the 2025 Blueprint would not achieve the 30 percent per capita VMT reduction by 2045 identified in the 2022 Scoping Plan. This threshold has been applied based on the regional scope of the plan and may not be appropriate at the project level.

Person Trips by Bicycle, Walk, or Transit Modes Per Capita

Estimates of person trips by walking, biking, and public transit from SACSIM are the basic measure of non-private-vehicle travel for evaluating change in non-private-vehicle modes. As with VMT, because of expected population growth, total trips are normalized to population and reported as per capita rates for purposes of impact analysis. An

increase in bike, walk, and transit trips per capita indicate that the land use Development Pattern and planned transportation improvements in the 2025 Blueprint are effectively working together to improve the mode share of non-auto travel. Compact and mixed land uses more effectively serve transit, support higher rates of walking and biking, and generate less vehicle travel.

Transit Passenger Boardings per Vehicle Service Hour

Transit service and vehicles need to be well-utilized to reduce GHG and air pollution emissions. For example, buses operate on fixed schedules throughout the day regardless of how many passengers are onboard. Since buses are large and consume more fuel per mile than passenger cars, it is important for them to carry multiple passengers to achieve desired emissions reductions. Passenger boardings per service hour is the most common and widely reported measure of transit productivity and efficiency. In general, the more boardings per hour, the more productive and efficient the system is.

Projected trends in transit ridership are shown in Table 3.16-5. From 2020 to 2050, transit ridership in the region is expected to more than double, from 136,00 daily riders to over 282,000. This will be coupled by a tripling of daily vehicle service hours, from 3,000 to over 9,000. This increase in service hours will also increase the number of jobs accessible within a 30-minute transit ride of environmental justice communities from 12,700 to over 38,000.

Table 3.16-5 Transit Service and Ridership

Variable	2020[2]	2050[3]	Change
Vehicle Service Hours[1]	3,064	9,199	200%
Passenger Boardings[1]	136,152	282,042	107%
Jobs within 30-minute transit ride of homes in environmental justice areas[3]	12,700	38,700	205%

[1] Includes all fixed route/fixed schedule transit services operating in the SACOG region.

[2] Data collected from local operators, compiled by SACOG 2025.

[3] Estimates and forecasts from SACSIM regional travel demand model.

Source: provided by SACOG in 2025.

Connectivity of the Region's Pedestrian and Bicycle System

The 2025 Blueprint contains a number of bicycle and pedestrian projects. These projects are generally designed to expand and complement the existing bicycle and pedestrian network. If the 2025 Blueprint was significantly interfering with bicycle and pedestrian facilities, trips per capita would decrease as individuals would be less likely or able to choose to walk or bike.

Movement of Agricultural and Farm Products on Rural Roadways

The movement of agricultural equipment and the delivery of farm products to market are essential roles of the roadway system in many rural areas and select parts of urban areas. Regional growth or development that degrade the efficiency of this resource would be considered to have a significant impact on the movement of agricultural goods.

Aviation

Aviation service is an integral component of moving people and goods in the SACOG region. The 2025 Blueprint accommodates forecasted growth in the plan area and does not impede aviation travel for people and goods. Disruption of existing and planned aviation services due to the land use pattern or transportation improvements in the 2025 Blueprint would create a significant impact on aviation. Ground access for airport passengers to the Sacramento International Airport is included in the SACSIM travel demand model.

Goods Movement

Many of the planned transportation improvements in the 2025 Blueprint are designed to help accommodate goods movement by rail, air, and roadway. Like aviation, the environmental impact assessment is focused on identifying potential disruption of existing or future goods movement.

Construction Activity

The planned transportation improvements in the 2025 Blueprint would require substantial construction activity during the life of the plan. The environmental impact assessment recognizes the disruptive nature of construction and focuses on providing potential specifications for construction activity that implementing agencies can use to reduce travel disruptions.

Safety

Transportation safety is assessed based on how the 2025 Blueprint projects would comply with applicable design standards of the implementing agencies. The analysis assumes implementing agencies would ensure that transportation systems and related issues are treated in accordance with applicable federal, state, and local laws and regulations.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, the project could have a significant adverse effect related to transportation if it would:

- Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. A project that causes any of the following would be considered to have a significant impact:
  - cause combined bicycle, walk, and transit person trips per capita to be lower than the regional average;
  - cause interference with existing or planned bicycle and pedestrian facilities;
  - substantially disrupt transit service; or,
  - cause a disruption to goods or agricultural products movement.
- Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) defined as a change in VMT per capita in the region inconsistent with CARB's 2022 Scoping Plan, including potential effects of induced travel;
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Result in inadequate emergency access.

ISSUES NOT DISCUSSED FURTHER

All potential transportation impacts are evaluated below.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.16-1: Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System, including Transit, Roadway, Bicycle, and Pedestrian Facilities

Regional Growth and Land Use Change/Transportation Network Improvements and Programs

The 2025 Blueprint contains various projects that would modify or expand the regional transportation network. These projects were developed to address existing deficiencies and/or in anticipation of future needs given projected population, employment, and travel growth in the region. The 2025 Blueprint projects conform to existing regional

plans, ordinances, and policies that address the circulation system and would not result in an increase to any of the following indicators.

Cause Combined Bicycle, Walk, and Transit Person Trips per Capita to be Lower than the Baseline Regional Average

The 2025 Blueprint includes a distribution of housing growth that is in line with recent permitting trends, and a distribution of employment growth that assumes robust job growth outside of the traditional job centers of the region. The 2025 Blueprint plans for 31 percent of regional housing growth to occur in Established Communities (inner ring suburbs) and 34 percent of housing in Developing Communities. Another 33 percent of regional housing demand would occur in Center and Corridor Communities. This residential growth is complemented by increased employment opportunities in each community type. Further, a primary goal of the 2025 Blueprint is to increase the number of people – both residents and employees – who have access to high-quality transit. By 2050, the 2025 Blueprint forecasts that an additional 153,644 dwelling units and 151,984 employees would be located in areas with high-quality transit service (see Table 2-9 in Chapter 2). This growth in HFTAs would support the use of transit as an alternative mode of transportation.

Compact land uses are more effectively served by transit, support potentially higher rates of walking and biking, and generate less vehicle travel. In addition to compact development, the amount of complementary, mixed-use development in the 2025 Blueprint would support higher rates of non-motorized travel and transit use. Table 3.16-6 provides measures of per capita trips by bicycle, walking, and transit. The table shows that per capita walking, biking, and transit trips would also increase.

Table 3.16-6 2025 Blueprint Transit, Bicycle, and Walk Travel

Mode of Travel	2020	2050
Weekday Person Trips by Walk/Bike/Transit		
Bicycle Trips	207,483	289,538
Walk Trips	879,757	1,086,472
Transit Trips	99,927	190,807
Population	2,540,353	3,120,053
Bicycle Trips Per Capita	0.08	0.09
Walk Trips Per Capita	0.35	0.35
Transit Trips Per Capita	0.04	0.06
Percent Change in Trips Per Capita from 2020		
Bicycle Trips	n/a	13.62%
Walk Trips	n/a	0.55%
Transit Trips	n/a	55.47%

Source: Data compiled by SACOG in 2025.

Cause Interference with Existing or Planned Bicycle and Pedestrian Facilities

The 2025 Blueprint conforms to and supports regional plans for the development of active transportation infrastructure. Table 3.16-7 shows the increase in Class I and Class II bicycle route miles for each county. The total number of bicycle route miles are forecast to increase from 2,070 in 2020 to 3,592 in 2050, an increase of 69 percent. This growth represents a transformational expansion of active modes infrastructure, with a 37 percent regionwide growth in per capita Class I and Class II bicycle route miles. The 2025 Blueprint supports regional active transportation plans, including the 2022 Sacramento County Active Transportation Plan, 2023 Yolo Active Transportation Corridors Plan, and 2018 Placer County Regional Bikeway Plan. Additionally, the supportive land uses and strategic investments in the 2025 Blueprint focus on improving the connectivity of the bicycle and pedestrian system.

Table 3.16-7 2025 Blueprint Bicycle Route Miles

County	Class 1	Class 2	Both Classes
2020[1]			
El Dorado[2]	17	252	269
Placer[2]	92	246	339
Sacramento	271	784	1,055
Sutter	15	56	71
Yolo	73	225	298
Yuba	12	27	39
Region	480	1,589	2,070
Miles Per 100k Population	*18.9*	*62.6*	*81.5*
2050 MTP/SCS[3]			
El Dorado[2]	62	366	428
Placer[2]	161	276	437
Sacramento	594	1,316	1,910
Sutter	36	85	121
Yolo	158	329	487
Yuba	34	75	109
Region	1,046	2,447	3,492
Miles Per 100k Population	*33.5*	*78.4*	*111.9*
Change from 2020			
El Dorado[2]	265%	45%	59%
Placer[2]	75%	12%	29%
Sacramento	119%	68%	81%
Sutter	140%	52%	70%
Yolo	116%	46%	63%
Yuba	183%	178%	179%
Region	118%	54%	69%
Miles Per 100k Population	*77%*	*25%*	*37%*

[1] 2020 route mileage from SACOG's regional GIS centerline data.

[2] El Dorado and Placer Counties exclude the Tahoe Basin portions.

[3] 2025 Blueprint 2050 are based on explicitly identified bicycle lane projects, plus an estimate of currently adopted bicycle master plans which may be funded or implemented through other planned transportation improvements, or as stand-alone projects.

Source: Data compiled by SACOG in 2025.

Substantially Disrupt Transit Service

The 2025 Blueprint conforms to and supports regional plans for the provision of transit service and expansion of transit infrastructure. Table 3.16-8 lists each service type and the existing and expected levels of vehicle service hours in 2050. Existing hours are characterized using 2020 data, which more accurately reflects the baseline conditions than 2025 because data is not available for 2025 and service hours have fluctuated since the COVID-19 pandemic. Table 3.16-8 shows how the 2025 Blueprint supports the region's growth of transit service hours across all modes by 208 percent by 2050. This includes a more than two-fold increase in BRT/fixed route bus service, and the provisioning of the Downtown Riverfront Streetcar, which would provide the first local rail link across the Sacramento River, connecting Downtown Sacramento and the Sacramento Railyards with West Sacramento and Sutter Health Park.

Table 3.16-8 2025 Blueprint Weekday Transit Revenue Service Hours by Service Type [1]

Service Types	Service Hours in 2020	Service Hours in 2050	# Change in Service Hours between 2020 and 2050	Percent Change in Service Hours between 2020 and 2050
Light Rail	241	309	+68	28%
Tram/Streetcar	0	30	+30	N/A
Express Bus	391	981	+590	151%
BRT/Fixed Route Bus	2,078	7,099	+5,021	242%
Shuttle	256	731	+475	186%
Regional Rail	20	49	+29	145%
Regional Total	2,986	9,199	6,213	208%

Note: Excluding services offered between midnight to 5:00 a.m.

[1] All estimates from SACSIM travel demand model.

Source: Data compiled by SACOG in 2025.

Cause a Disruption to Goods or Agricultural Products Movement

A goal of the 2025 Blueprint is to preserve and, where possible, enhance the efficiency of product movement. This goal can be challenged when growth includes new or expanded roads that cut through existing agricultural lands or disrupt agricultural equipment access to fields, processing destinations, or other agricultural goods movement routes. However, the 2025 Blueprint conforms to and supports regional plans for the distribution of goods and agricultural products.

Table 3.16-9 provides a tabulation of roadway classes by route miles and lane miles for the SACOG region. "Route miles" are the centerline mileage of roads. "Lane miles" are route miles multiplied by the number of lanes on the roadway. This table compares data from years 2020 and 2022, the most recent year for which data is available, to the projected 2025 Blueprint outcomes.

Table 3.16-9 2025 Blueprint Roadway Route and Lane Mileage in the Plan Area by Class

Roadway Class	2020	2022	2050 MTP/SCS	Change from 2020	% Change from 2020	Change from 2022	% Change from 2022
Route Miles							
General Purpose Freeway	320	320	320	+	+%	+	+%
HOV/HOT Lane[2]	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Auxiliary Lanes/Ramps[2]	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Expressways/Arterials	1,573	1,548	1,730	+157	+10%	+181	+12%
Collectors/Local Streets[3]	10,678	10,741	12,366	+1,688	+16%	+1,625	+15%
All Roadway Classes	12,571	12,610	14,416	+1,845	+15%	+1,806	+14%
Arterial & Above	1,893	1,869	2,050	+157	+8%	+181	+10%
Lane Miles							
General Purpose Freeway	1,684	1,684	1,696	+12	1%	+12	+1%
HOV/HOT Lane[2]	130	n/a 4	247	+117	90%	n/a	n/a
Auxiliary Lanes/Ramps[2]	238	n/a 4	311	+74	31%	n/a	n/a
Arterials/Expressways	4,145	4,080	4,835	+690	17%	+755	+19%
Collectors/Local Streets[3]	22,249	22,371	25,636	+3,387	15%	+3,265	+15%
All Roadway Classes	28,446	28,135	32,725	+4,279	15%	+4,590	+16%
Arterial & Above	6,196	5,763	7,089	+892	14%	+1,325	+23%

Roadway Class	2020	2022	2050 MTP/SCS	Change from 2020	% Change from 2020	Change from 2022	% Change from 2022
Population	2,540,353	2,540,425	3,120,053	+579,700	23%	+579,628	+23%
Lane Miles Per Thousand People	11.20	11.07	10.49	-0.71	-6%	-1	-5%

[1] From "California Public Road Data Reports," and Highway Performance Monitoring Data provided by Caltrans. Data assembled by and modified SACOG to include HOV and auxiliary lane mileage.

[2] Since HOV/HOT lanes, auxiliary lanes and ramps are located within other freeway routes, they do not generate route mileage, only lane mileage. No existing HOT lanes in 2020 or 2022.

[3] Quantity of local streets based on applying a per capita rate to population growth.

[4] Lane mile by lane type data not available in "California Public Road Data Reports."

Source: Data provided by SACOG 2025.

Table 3.16-9 indicates that the 2025 Blueprint supports the maintenance of total roadway lane miles in the region, with a 23 percent increase in lane miles classified as arterial and above. With population growth, this increase represents a 5 percent decrease in lanes per capita since 2022. This reduction should, therefore, not cause disruptions to the distribution of goods or agricultural products.

Summary

The 2025 Blueprint is not expected to conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.16-2: Result in a Change in per Capita VMT that is Inconsistent with CARB's 2022 Scoping Plan

Regional Growth and Land Use Change/Transportation Network Improvements and Programs

SB 375 requires MPOs to explicitly account for the combined effects of land use and planned transportation improvements in updates to the regional transportation plans. Informing the development of the 2025 Blueprint is a body of research and knowledge on the relationship between characteristics of land use and travel behavior, often referred to as "the Ds." The land use characteristics recognized as most influential to travel behavior are listed below (Ewing and Cervero 2010).

- **Regional Accessibility ("Destinations")** is a way of quantifying how "connected" a given area is to the existing development in a region and is usually stated as the number of jobs within an "average" auto commute drive time. It is a measure of how many activities are within a reasonable drive time from a given place of residence. Within the existing urbanized area, regional accessibility is usually higher, because there is higher concentration of jobs in closer proximity to residential development. In outlying areas or areas on the urban edge, where a major part of the area within a given travel time is undeveloped, this measure tends to be lower. This factor has the strongest potential effect on VMT; a 10 percent increase in this measure would, on average, result in a 2 percent decline in VMT for residents of an area.
- **Street Pattern/Urban Design ("Design")** refers to how "walkable" a given area is, based on characteristics of the street pattern. Walkability is usually measured as the density of intersections in a given area. The greater the number of intersections, the smaller the blocks and the more potential walking connections there are in that area. Although other factors (e.g., presence/absence of sidewalks, pedestrian amenities on the street, traffic volumes on streets, presence/absence of crosswalks, treatment of pedestrians at signalized intersections) affect walkability and walk mode share, street pattern has been used as a proxy in research, in part because it is relatively easy to assemble data. In terms of VMT reduction, this is the second strongest factor, with a 10 percent

improvement resulting in, on average, a 1.2 percent reduction in VMT, a 2 percent increase in trips made by transit, and a 4 percent increase in trips made by walking.

- **Mix of Use ("Diversity")** refers to the inclusion in an area of a range of complementary land uses, which allows for more activities (e.g., working, shopping, school) to be contained within that area. Good land use mix allows for reductions in VMT through shortening of vehicle trips or shifting to other non-vehicle modes of travel like walking. The most common measures of mix of use combine the relative proportions of residential, overall jobs, retail, and other residential supporting land uses into an "entropy" formula. A 10 percent improvement in the mix of use would, on average, result in a 0.9 percent reduction in VMT, and a just over 1 percent increase in walk and transit trips.
- **Distance to Transit ("Distance")** refers to the distance from a residence to the nearest transit station or stop, with VMT declining, and both walking and transit use increasing, as distance to the nearest transit decreases. Although this factor has a modest impact on VMT, with a 10 percent improvement resulting in, on average, a less-than 1 percent decrease in VMT, the potential to increase transit trip-making is greater, with a nearly 3 percent increase.
- **Residential Density ("Density")** refers to the number of persons or dwellings clustered into a given area. Conceptually, density is quite easy to understand—it is the number of people or dwellings located in a given area. However, because there are different definitions of area (e.g., net acreage, gross acreage, total area) the effects of density are often over- or under-stated. Recent research shows that a 10 percent increase in density at the place of residence might reduce VMT by about 0.4 percent.

These land use and transportation factors are not the only factors influencing travel in the SACOG region. Other important factors, which are accounted for in the modeling and forecasting tools, described in greater detail below, include:

- demographic factors such as age, income, household size, and number of workers;
- household transportation costs, in particular costs of fuel and transit fares;
- characteristics of travel in neighboring regions and the amount and extent of external, or through, travel they might generate in the SACOG region; and
- geographic features such as rivers, which may separate or divide areas.

Through the development of the 2025 Blueprint, SACOG has taken into account the general land use and transportation relationships described above and, along with other factors, applied them to the task of developing the land use forecast and the planned transportation improvements. In particular, the following mobility principles guided development of the 2025 Blueprint:

- The value of compact development and mixed-use development to support an efficient transportation system and reduce the need for vehicle travel for future residents engaging in work, school, and other activities within the region.
- The necessity of aligning transit services in corridors with sufficient density and concentration of uses in order to support more efficient, productive service.
- The value of providing alternatives to driving alone, including bicycle routes, transit service, and land use patterns that allow for walking to activities near home or work, as an effective way to reduce vehicle travel.
- The value of creating pleasant, high quality pedestrian environments to encourage residents to make more trips by walking.

Table 3.16-10 and below summarize the Development Pattern projected by the 2025 Blueprint, sorted by each of the four Ds and by Community Type.

- **Regional Accessibility ("Destinations")** would increase by 20 percent overall, with all community types increasing by 20 percent or more relative to 2020. Center and Corridor Communities would have the highest level of regional accessibility in both existing conditions (2020) and in 2050 with implementation of the 2025 Blueprint. — Upon buildout of the 2025 Blueprint growth pattern, accessibility to jobs would be 20 percent higher by car and 186 percent higher by transit for residents of Center and Corridor Communities, compared existing conditions. Accessibility to jobs would decline for the remaining area types, with residents of Rural Residential Communities and Lands Not Identified for Development having the lowest accessibility in both 2020 and 2050, with 70 percent or more below regional averages. This reflects the fact that Center and Corridor Communities are centrally located in the region and are generally surrounded by Established Communities. Developing Communities, Rural Residential Communities, and Lands Not Identified for Development are located on the urban edge or are completely outside the urbanized area. Developing Communities, to the extent they are at the edge of the urbanized area, have access to jobs on only one side. These locational factors drive down regional accessibility and, by extension, drive up VMT generation.
- **Street Pattern ("Design")** would follow a pattern similar to regional accessibility, with Center and Corridor Communities measuring the highest of all community types in both 2020 and 2050. Overall, the street pattern measure (in this case, intersection density) would increase by 8 percent regionally. Each community type would increase by 4 percent or more.
- **Mix of Use ("Diversity")** is highest in Center and Corridor Communities and Established Communities, largely because these areas are located near jobs and commercial centers. In 2020, Rural Residential Communities were low in the measured mix of use (17) on the SACOG mix index.[4] In general, measured land mix of use is low in these areas because they are predominantly residential, with very little commercial, school, or other supportive non-residential uses within one-half mile of residences. The biggest change in mix of use between 2020 and 2050 would occur in Developing Communities (43 percent increase). This change reflects a significant amount of growth, especially in non-residential development and schools, in the planning for these areas.
- **Distance to Transit ("Distance")** is lowest in Center and Corridor Communities, with distance to the nearest transit station or stop averaging approximately 0.22 of a mile per resident in 2020 and experiencing an approximate 3 percent reduction to 0.21 of a mile per resident in 2050. Regional average distance to transit would decrease from 1.04 miles per resident in 2020 to 0.91 miles per resident by 2050. Distance to transit is greatest in Rural Residential Communities, where the average distance to transit is about 2.23 miles per resident (2020).
- **Residential Density ("Density")** of developed parcels would increase overall by about 25 percent, from an average of 1.2 dwellings per net residential acre to 1.5 units per acre. The biggest change would occur in Developing Communities, where growth as a percentage of 2020 existing development would be high, and significantly higher in density than the baseline because the baseline is rural residential or undeveloped land. Established Communities would experience little change because the amount of growth would be relatively small compared to the amount of existing development in 2020. Center and Corridor Communities are both the highest in density and would experience the second most significant change, with an estimated increase from about 11.0 units per net acre to about 15.4 units per acre by 2050.

[4] SACOG's mix index is a variant on an entropy index. It is defined as a residential mix, and measures the degree to which an optimal array of activities and services, which support residents, are present within a one-half mile radius (i.e., 502.6 acres) around the place of residence. The measure includes total jobs per household, retail jobs per household, K-12 school enrollments per household, and medical jobs per household. An area with a perfect balance of each of these factors would score 100; a completely homogenous area, with no mix of use, would score 0.

Table 3.16-10 2025 Blueprint Key Land Use and Transportation Characteristics by Community Type

Land Use/ Transportation Factor	Community Type				
	Center and Corridor	Established	Developing	Rural Residential	Regional Average
Year 2020					
Regional Accessibility[1] (Auto)	651,028	468,365	297,868	128,977	450,049
Regional Accessibility[1] (Transit)	35,182	3,442	24	3	6,568
Street Pattern/Urban Design[2]	77	54	33	9	50
Mix of Use[3]	42	43	30	17	41
Distance to Nearest Transit[4]	0.22	0.57	1.51	2.23	1.04
Residential Density[5]	11.0	4.7	1.0	0.1	1.2
Year 2050					
Regional Accessibility[1] (Auto)	783,502	562,350	362,957	163,295	541,742
Regional Accessibility[1] (Transit)	100,583	22,252	5,080	464	30,227
Street Pattern/Urban Design[2]	88	58	35	10	54
Mix of Use[3]	52	48	43	18	46
Distance to Nearest Transit[4]	0.21	0.51	1.02	2.17	0.91
Residential Density[5]	15.4	4.9	3.8	0.1	1.5
Change from 2020 to 2050					
Regional Accessibility[1] (Auto)	20%	20%	22%	27%	20%
Regional Accessibility[1] (Transit)	186%	546%	21,067%	15,367%	360%
Street Pattern/Urban Design[2]	14%	8%	8%	4%	8%
Mix of Use[3]	24%	12%	43%	6%	12%
Distance to Nearest Transit[4]	-5%	-11%	-32%	-3%	-13%
Residential Density[5]	40%	4%	280%	0%	25%

Notes: All numbers are averages for residences in each community type across the region.

[1] Total jobs within 30-minute travel time from place of residence to jobs; for drive, times based on AM peak period roadway times for transit, travel times include estimates of average walk to first station/stop, average wait time, line haul times, transfer times (if any), and walk time to final destination.

[2] Intersection density, stated as intersections per square mile, within 1/2 mile of place of residence.

[3] SACOG entropy index, 0 to 100 scale with 0 = low, 100 = best mix of use. The land use diversity index measures an area's ratio of households compared to amenities including total jobs, K-12 enrollment, and employment in the retail and service sectors, within 1 mile of residence by community type.

[4] Shown as distance from place of residence to nearest transit station or stop, in miles per resident.

[5] Dwelling units per net residential acre, within 1/2 mile of place of residence.

Source: Data compiled by SACOG in 2025.

The data above indicate that the 2025 Blueprint would result in positive changes in the key land use and transportation indicators understood to reduce VMT. Table 3.16-11 provides estimates of household-generated VMT for the region as a whole. The 2025 Blueprint forecasts that household-generated VMT would increase by approximately 6.2 million miles per weekday. This increase is primarily due to the addition of approximately 580,000 new residents by 2050. However, the projected household-generated VMT per capita rate would decrease by 7.8 percent by 2050. This projection indicates that, through a mixture of changing land use patterns and travel patterns, the per capita length of vehicle trips to and from homes would decrease.

Table 3.16-11 2025 Blueprint Regional Household VMT Per Capita

Variable	Baseline (2020)	2025 Blueprint Horizon (2050)
Household-Generated VMT[1]	43,520,005	49,287,678
Population	2,540,353	3,120,053
Household-Generated VMT per Capita	17.13	15.80
% Change from Baseline		*-7.8%*

[1]Includes household-generated VMT for all residents of the SACOG region, for travel within the region. This is a subset of total VMT. Estimates and forecasts from SACSIM regional travel demand model.

Source: Data compiled by SACOG in 2025.

The VMT per capita decline indicates that the projected land use pattern and planned transportation improvements assumed in the 2025 Blueprint would minimize increases in VMT via the following strategies:

- The 2025 Blueprint reflects a more compact development form for the region. Compact land uses across the region in the 2025 Blueprint are more effectively served by transit, support potentially higher rates of walking and biking, and generate less vehicle travel. In addition to compact development, the amount of complementary, mixed-use development in the 2025 Blueprint further supports shorter vehicle trips and higher rates of non-motorized travel. Further benefits result from concentrating development in high-quality transit corridors, where residents are more likely to use available transit.
- The 2025 Blueprint places an emphasis on transit service and complete streets near transit, walk, and bicycle supportive land uses with higher density and a mix of uses most likely to generate a mix of travel modes. Road and highway projects concentrate on alleviating major bottlenecks and congestion points, while other 2025 Blueprint supportive programs and transportation systems management strategies, including technology and demand management programs, allow for greater optimization of existing transportation infrastructure.

Table 3.16-12 shows how the 2025 Blueprint would affect total VMT in the SACOG region, broken down by county. All counties in the region are expected to see increases in VMT of over 5 percent by 2050, with five of the six counties in the plan area projected to see total VMT increases of over 15 percent by 2050. These combine for a regionwide increase of 579,000 VMT and a regionwide decrease of VMT per capita of 1.3 miles, or a decrease of 5.5 percent from 2020 levels. This projected decrease in per capita VMT does not meet the recommendation for 30 percent reduction below 2019 levels by 2045 laid out in the CARB 2022 Scoping Plan (CARB 2022a).

Table 3.16-12 2025 Blueprint Roadway VMT by County

County	2020 Daily VMT[1]	2050 Daily VMT[1]	# Changes	% Changes
El Dorado	4,034,088	4,262,699	228,611	5.7%
Placer	10,400,596	12,761,423	2,360,827	22.7%
Sacramento	35,277,108	40,497,416	5,220,308	14.8%
Sutter	2,469,306	2,885,689	416,383	16.9%
Yolo	6,415,883	7,614,015	1,198,132	18.7%
Yuba	1,913,099	2,201,192	288,093	15.1%
Region	60,510,080	70,222,434	9,712,354	16.1%
Population	**2,540,353**	**3,120,053**	**579,700**	**22.8%**
VMT per Capita	**23.8**	**22.5**	**-1.3**	**-5.5%**

[1] Includes roadway VMT of the SACOG region, for travel within the region. Estimates and forecasts from SACSIM regional travel demand model.

Source: Data compiled by SACOG in 2025.

Notwithstanding changes to behavior among current residents, the 2025 Blueprint projects that the region's new residents by 2050 will travel an additional 9,344,575 VMT, for a VMT per capita of 16.1 miles among this subset of the region. Overall, this group is projected to travel approximately 29 percent less VMT per capita than the region's population did in 2020. This reduction represents how the 2025 Blueprint encourages a more compact development form in the region that would allow residents to make trips by transit and by active modes. Even where trips continue to be made by driving alone, the region's compact development pattern would allow those trips to be shorter. In fact, the 2025 Blueprint projects that household VMT per capita will decrease by 7.8 percent despite the rate of drive-alone person commute trips increasing slightly, from 62.5 percent in 2020 to 63.9 percent projected in 2050.

The 2025 Blueprint's emphasis on transit service and travel by active modes is another key element in projected decreases to VMT per capita. The 2025 Blueprint's investment and policy strategies include:

- Increasing transit service hours by 200 percent; from 0.44 hours per person per year in 2020 to 1.08 hours per person per year in 2050. Providing more transit service allows for higher frequency service on productive corridors, broader coverage during the weekday (e.g., more evening service), and more service during weekend hours. This increase in transit service is projected to result in a doubling of transit ridership, from 136,152 in 2020 to 282,042 in 2050 (Table 3.16-5).

Summary

The impact of the transportation projects and policies in the 2025 Blueprint would result in a decrease in total regional VMT per capita by the year 2050 of 5.5 percent. The region is making progress in VMT reductions through the development of new initiatives, projects, and programs in the 2025 Blueprint, and is not directly interfering with the statewide VMT reductions required to meet the state's climate goals. However, the plan does not clearly establish the necessary level of VMT reductions now forecast as required by the State in CARB's 2022 Scoping Plan. And although the State acknowledges that SACOG and other MPOs cannot meet this need without the collaboration and help of the State itself, as well as local partners, at the time of writing this Draft EIR it is unknown how CARB and other State agencies, through statewide programs or in coordination with local and regional governments, would meet the identified higher VMT reductions. While SACOG stands ready to contribute to this statewide effort, the gap in VMT reductions needed to achieve the State's 2030 and 2050 targets remains. As a result, the potential of the projected land use pattern and planned transportation improvements of the 2025 Blueprint to substantially interfere with achievement of the VMT reductions set forth in the CARB 2022 Scoping Plan at the regional level would be **potentially significant**.

Mitigation Measures

SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of other public agencies. However, implementation of the following measure or other comparable measure identified by the lead agency would reduce VMT impacts and local agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081).

Mitigation Measure 3.16-1: Implement VMT Reduction Strategies

The State recognized that additional State policy actions and funding would be required to close the VMT gap between what the MPOs could achieve through implementation of their SCSs and reductions needed to meet State goals (CARB 2022c). Though the State must initiate these additional actions and funding programs, the exact form of the policies and funding programs must be collaboratively developed with input from MPOs, local agencies, and other organizations to ensure they provide the tools and incentives necessary to go beyond the SCSs in reducing VMT. SACOG shall be an active participant in this process to develop and explore pathways to implement State-level VMT reduction strategies, such as those outlined in Appendix C (2022 Scoping Plan) through a transparent and inclusive interagency policy development process to evaluate and identify implementation pathways for additional policies to reduce VMT and promote sustainable communities. SACOG developed the "Green Means Go" program as part of the 2020 MTP/SCS, which SACOG shall continue to implement this pilot for some of the infill incentives and support for transit and innovative mobility that are envisioned in the 2022 Scoping Plan as key elements of filling that VMT gap.

In addition, implementing agencies shall comply with State guidance on VMT reduction, which may be achieved by implementation of the following:

- Implementing agencies shall require project modifications during the project design and environmental review stage of project development that would reduce VMT effects in a manner consistent with state guidance on VMT reduction. For roadway capacity expansion projects, this would include but is not limited to demand management through transportation systems management and operations (TSMO) including the use of pricing. Other project modifications may include, but are not limited to:
  - improve or increase access to transit;
  - increase access to common goods and services, such as groceries, schools, and daycare;
  - incorporate affordable housing into the project;
  - incorporate neighborhood electric vehicle network;
  - orient the project toward transit, bicycle, and pedestrian facilities;
  - improve pedestrian or bicycle networks, or transit service;
  - provide traffic calming;
  - provide bicycle parking;
  - limit or eliminate parking supply;
  - unbundle parking costs;
  - provide parking cash-out programs;
  - implement roadway pricing;
  - implement or provide access to a commute reduction program;
  - provide car-sharing, bike sharing, and ride-sharing programs;
  - provide transit passes;
  - shift single occupancy vehicle trips to carpooling or vanpooling, for example providing ride-matching services;
  - provide telework options;
  - provide incentives or subsidies that increase the use of modes other than single-occupancy vehicles;
  - provide on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms;
  - provide employee transportation coordinators at employment sites;
  - provide a guaranteed ride home service to users of non-auto modes;
  - locate the project in an area of the region that already exhibits low VMT;
  - locate the project near transit;
  - increase project density;
  - increase the mix of uses within the project or within the project's surroundings;
  - increase connectivity and/or intersection density on the project site; and/or
  - deploy management strategies (e.g., pricing, vehicle occupancy requirements) on roadways or roadway lanes.
- Implementing agencies shall require implementation of VMT reduction strategies through transportation demand management programs, impact fee programs, mitigation banks or exchange programs, in-lieu fee programs, or other land use project conditions that reduce VMT in a manner consistent with state guidance on

VMT reduction. Programs should be designed to reduce VMT from existing land uses, where feasible, and from new discretionary residential or employment land use projects. Project conditions should be reserved for situations where programs are not feasible. The design of programs and project conditions should focus on VMT reduction strategies that increase travel choices and improve the comfort and convenience of sharing rides in private vehicles, using public transit, riding bicycles/scooters, or walking.

Significance after Mitigation

If the implementing agency adopts this mitigation measure, Impact 3.16-2 would be reduced in some communities, although additional State policy actions and funding would be required to close the gap at the state level and the impact would remain significant. The strategies identified are programmatic; they would need to be refined and matched to local conditions in any subsequent project level environmental analysis. For projects proposing to streamline environmental review, lead agencies must comply with State guidance on VMT reduction and conduct project-level analysis for each project to analyze whether, based on substantial evidence in the record, the proposed mitigation would reduce the VMT impact to less than significant. However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, this impact would be **significant and unavoidable** for purposes of this program-level review.

Impact 3.16-3: Substantially Increase Hazards due to a Geometric Design Feature or Incompatible Uses

Regional Growth and Land Use Change/Transportation Network Improvements and Programs

The regional growth pattern of the 2025 Blueprint does not define design-level features of roadways. While the 2025 Blueprint expands development and increases density in the plan area, this growth would not impact geometric design features or roadway uses in a consistent way, as those design standards and uses are established and enforced at the local jurisdictional level. The 2025 Blueprint would decrease hazards due to geometric features and incompatible uses through a variety of policies and programs:

- Specific transportation projects under the 2025 Blueprint would be subject to and expected to follow the design guidelines and allowable uses established by the State or the local jurisdiction with authority over the project. Construction activities from implementation of the 2025 Blueprint would be short term, intermittent, and geographically dispersed. At the regional level, these disruptions would be localized, and impacts would be limited and would not represent a significant impact to the operations of the regional transportation system. At the local level, construction activities could increase travel on local roads and result in detours or increased congestion in certain locations. The actual construction details of land use development projects and proposed transportation projects are not known because the projects are in the early stages of planning. Construction impacts should be evaluated at the project level as more information about the timing, design, scope, and construction programs are available. Construction activities for land use development and transportation projects are required to be conducted in accordance with, and subject to review by, all applicable State and/or local jurisdictions with authority over the project; thus, ensuring projects would be designed to minimize the potential for hazardous conditions and to ensure safe travel by all modes. Local safety planning efforts are supported by regional policies and strategies.
- The 2025 Blueprint supports SACOG's work with local partners to plan and implement intelligent transportation system (ITS) projects that improve traffic operations and safety and reduce emissions in the region. ITS utilize advanced communications and computer technologies to improve transportation operations through technologies including freeway ramp meters, dynamic message signs, traffic signal timing and preemption, and closed-circuit television cameras. Information fed to, and gathered from, these field devices is transmitted over fiber optic and wireless channels that are linked to central operation centers. Operators at these centers can monitor traffic flow and transit service in real-time and then, remotely, adjust the system in response to changing conditions in the field.

The 2025 Blueprint is not expected to adversely affect the design of transportation facilities. Rather, investments are expected to incentivize design improvements to make transportation facilities and infrastructure safer. Therefore, the potential of the 2025 Blueprint to substantially increase hazards due to geometric design features or incompatible uses would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.16-4: Result in Inadequate Emergency Access

The 2025 Blueprint's impact on emergency response plans and evacuation plans are analyzed in Section 3.14, "Public Services," Section 3.17, "Utilities and Service Systems," and in Section 3.18, "Wildfire." The 2025 Blueprint's core strategy is for dense development in developed areas that are generally more efficient at serving the public for emergency response. This is often because developed areas tend to be well served with these facilities and also because the denser land use pattern better facilitates access to specific sites. Transportation infrastructure plays a key role in providing access to destinations during emergencies. These systems must be able to provide access for emergency response vehicles, personnel, and equipment. In widespread disasters, the region's roads and other transportation networks can determine the success or failure of the region during the emergency and in the recovery. Land use and transportation projects will require construction activities that may cause temporary impairments or increased congestion on transportation facilities that are used for emergency access, such as construction equipment for a building project blocking part of a street or construction of a new roadway lane temporarily redirecting travel on an alternate route. All transportation projects in the 2025 Blueprint would be expected to comply with local regulations regarding the maintenance of emergency access during construction. Road closures would be temporary and would be coordinated with emergency responders so that alternative evacuation routes could be developed and employed. Construction associated with implementation of the 2025 Blueprint would not likely hinder emergency access. Although construction activities could temporarily impair roadways used for emergency response and evacuation, standard construction procedures for development of a construction management plan would address these conditions and would require the development of alternative routes. Projects requiring encroachment permits for temporary construction activities in public roadways that could be used for emergency response or evacuation are generally required to prepare traffic mitigation plans that address traffic control during the period when project construction is occurring within public right-of-way. To address any temporary road closures that would be required during construction, standard construction procedures include notification of emergency responders and development of alternative routes for emergency access.

The actual design details of land use development projects and proposed transportation projects are not known because the projects are in the early stages of planning. However, local jurisdictions have design standards for new and existing development and roadways to ensure adequate passage of emergency vehicles. Standards include specifications related to clear width, effective turning radius, and turnouts. Further, emergency access for land use development and transportation projects would be subject to review by State and/or local jurisdictions with authority over the project as well as responsible emergency service agencies, thus, ensuring projects would be designed to meet all applicable emergency access and design standards.

Summary

While implementation of the 2025 Blueprint Development Pattern, infrastructure, and transportation projects could temporarily impede emergency access at those project locations during construction periods, construction projects must conform to local regulations requiring maintenance of emergency access during construction. Additionally, projects developed under the 2025 Blueprint would be required to comply with State and local fire code standards related to emergency access. Improved roadways are anticipated to facilitate emergency access. Therefore, impacts on emergency access would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

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3.17 TRIBAL CULTURAL RESOURCES

This section analyzes and evaluates the potential impacts of the project on known and unknown (undiscovered or unidentified) tribal cultural resources. Tribal cultural resources, as defined by Assembly Bill (AB) 52, Statutes of 2014, in Public Resources Code (PRC) Section 21074, are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe. A tribal cultural landscape is defined as a geographic area (including both cultural and natural resources and the wildlife therein) associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.

One comment letter regarding tribal cultural resources was received in response to the notice of preparation (see Appendix A). The Native American Heritage Commission (NAHC) requested AB 52 and Senate Bill (SB) 18 compliance information; SB 18 does not apply to the project because there is no General Plan amendment associated with the project (which is the trigger for SB 18 compliance). AB 52 compliance is described below.

3.17.1 Regulatory Setting

FEDERAL

There are no federal regulations that apply to tribal cultural resources as defined by PRC Section 21074.

STATE

California Register of Historical Resources

All properties in California that are listed in or formally determined eligible for listing in the National Register of Historic Places (NRHP) are also listed in the California Register of Historical Resources (CRHR). The CRHR is a listing of State of California resources that are significant in the context of California's history. It is a Statewide program with a scope and with criteria for inclusion similar to those used for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR.

A historical resource must be significant at the local, State, or national level under one or more of the criteria defined in the California Code of Regulations Title 15, Chapter 11.5, Section 4850 to be included in the CRHR. The CRHR criteria are tied to CEQA because any resource that meets the criteria below is considered a significant historical resource under CEQA. As noted above, all resources listed in or formally determined eligible for listing in the NRHP are automatically listed in the CRHR.

The CRHR uses four evaluation criteria:

Criterion 1. Is associated with 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.

Criterion 2. Is associated with the lives of persons important to local, California, or national history.

Criterion 3. Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of a master; or possesses high artistic values.

Criterion 4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

A historical resource must meet one of the above criteria and retain integrity to be listed in the CRHR. The CRHR uses the same seven aspects of integrity used by the NRHP: location, design, setting, materials, workmanship, feeling, and associations.

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on "tribal cultural resources." PRC Section 21084.2 establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." PRC Section 21074 states:

a) "Tribal cultural resources" are either of the following:

    1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are either of the following:

        A) Included or determined to be eligible for inclusion in the CRHR.

        B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

    2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American Tribe.

b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

AB 52, signed by the California Governor in September of 2014 and incorporated into the CEQA statute (PRC Section 21080.3.1), established a new class of resources under CEQA: "tribal cultural resources," defined in PRC Section 21074. Based on the understanding that California Native American tribes traditionally and culturally affiliated with a geographic area may have expertise concerning their tribal cultural resources, AB 52 established a consultation requirement that applies to all discretionary projects for which the lead agency prepares a negative declaration, mitigated negative declaration, or environmental impact report. Specifically, within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which must be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

Health and Safety Code, Section 7050.5

Section 7050.5 of the Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If they are determined to be those of a Native American, the coroner must contact NAHC.

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act (PRC Section 5097.9) applies to both State and private lands. The act requires, upon discovery of human remains, that construction or excavation activity cease and that the county coroner be notified. If the remains are those of a Native American, the coroner must notify the NAHC, which notifies (and has the authority to designate) the most likely descendants of the deceased. The act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Public Resource Code Section 5097

PRC Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal land. The disposition of Native American human burials falls within the jurisdiction of the NAHC. Section 5097.5 of the Code states the following:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

LOCAL

General Plans

Many cities and counties include cultural and resource preservation policies in their general plans that include some mechanism for protecting cultural resources in those communities. In general, the sections pertaining to pre-contact archaeological resources address identification and afford tribal cultural resources a measure of local protection. The policies outlined in the individual general plans should be consulted prior to any undertaking or project.

Cultural resources and tribal cultural resources are generally discussed in the Open Space Element, the Conservation Element, or a Preservation Element of a general plan. Policies regarding tribal cultural resources are similar throughout the plan area and call for their identification, protection, interpretation, and enhancement.

3.17.2 Environmental Setting

ETHNOGRAPHIC SETTING

Ethnographic records show that the groups that inhabited El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties are the Nisenan (Southern Maidu), the Plains Miwok (an Eastern Miwok subgroup), and the Patwin. The Washoe are not included in this discussion because the plan area is outside of the Tahoe Basin, their traditional lands.

Nisenan

Several ethnographers have studied the Maidu people and generally agree that Nisenan territory included the drainages of the Bear, American, Yuba, and southern Feather rivers. Their permanent settlements were generally located on ridges separating parallel streams, either on crests, knolls, or terraces, part way up these ridges (Wilson and Towne 1978).

Nisenan territory offered abundant year-round food sources. Food gathering was based on seasonal ripening, but hunting, gathering, and fishing went on all year, with the greatest activity in late summer and early fall. They gathered many different staples, not depending on one crop. Seasonal harvests were gathered for both communal and personal family use. Most activities and social behaviors such as status, sharing, trading, ceremonies, and disagreements were important adjuncts to the gathering and distribution of food. Extended families or whole villages of hill Nisenan would gather acorns. Men would hunt while women and children gathered the acorns knocked from the trees. Buckeye nuts, sugar and digger pine nuts, and hazelnuts were also gathered. Acorns were cracked on an acorn anvil and shelled. They were then ground into flour using a bedrock mortar (grinding rock) and a soaproot brush to control scattering the resulting flour. The flour was leached to remove the tannin then cooked in watertight baskets. Cooking was done with fire heated stones that were lifted with two sticks, dipped in water to clean them, and then dropped into the cooking basket. Enough soup and mush were usually prepared to last several days (UAIC 2025a).

Roots were dug with a digging stick in the spring and summer and were eaten raw, steamed, baked, or dried and pounded in mortars and pressed into cakes to be stored for winter use. Wild onion (*chan*), sweet potato (*sí kum*), and "Indian potato" (*dúbus*) were the most desired. Wild carrot (*ba*) was used as medicine while wild garlic was used to wash the head and body. Grasses, herbs, and rushes provided food and material for clothing and baskets. Clover (*Trifolium willdenovii*) was an important food for Nisenan people as it was the first fresh herb available after winter and its emergence set the timing of the Nisenan spring flower dance. Seeds were gathered using a seed beater and tray.

They were then parched, steamed, dried, or made into mush. Many varieties of wild plums, native berries, grapes, and other native fruits were eaten. Manzanita berries were often traded to the valley or made into a cider-like drink.

Deer drives were common, with several villages participating and the best marksman doing the killing. The animals were often driven into a circle of fire then killed. Deer were also hunted using deadfalls, snares, and deerskin and antler decoys. Sometimes they were run down on soft ground or snow. Antelope were taken by surround, drives, and flag decoys while elk were usually killed along waterways on soft ground. The bear hunt was very ceremonial. Black bears were usually hunted in the winter. Lighted brands were often used to drive them from their dens. Grizzlies that lived on the valley floor were greatly feared and rarely hunted. Wildcats and California mountain lions were hunted for food and their skins. Rabbits and other small game were killed with blunted arrows and sticks. Traps, nets, snares, fire, and rodent hooks were also used. In the foothills and valley nets were made into a fence where driven rabbits were entangled and clubbed. Drives generally took place in the late spring. The man in charge of the drive divided the catch. Other small animals were often caught and killed, with exception to the coyote. Game meat was baked, roasted, or dried.

Weirs, traps, harpoons, nets, and gorge hooks, as well as tule balsas and log canoes were used in fishing. Fish were poisoned using turkey mullein and soaproot or driven into shallow water and caught by hand. Freshwater mussels were obtained in the larger rivers. On the lower courses, sturgeon and salmon were netted and speared. Whitefish, suckers, and trout were caught at higher elevations. Waterfalls were eel (freshwater lamprey) fishing stations; Salmon Falls, on the south fork of the American River, was one such location. Birds were taken with nets, arrows, snares, traps, and nooses. Owls, vultures, and condors were not killed. Bird skins and feathers were used for regalia, clothing, and decoration. Salt was acquired from springs near Lincoln, Cool, and Latrobe. It was also acquired from a plant with cabbage-like leaves gathered in the summer (UAIC 2025a; Wilson and Towne 1978).

Plains Miwok

The Plains Miwok are part of the larger Eastern Miwok group that forms one of the two major divisions of the Miwokan subgroup of the Utian speakers. The Plains Miwok lived in the Sacramento Valley along the Sacramento, Cosumnes, and Mokelumne rivers. They built their homes on high ground, with major villages concentrated along the major waterways. Conical homes were constructed with poles and thatching of brush, grass, or tule, though semisubterranean earth-covered homes were built as well. Major villages contained an assembly house, which was a semisubterranean structure with a diameter of 40 to 50 feet, as well as a sweathouse, which was a scaled-down version of the assembly house. Plains Miwok people utilized the rich resources of the delta and surrounding area for both dietary needs and material culture. Tules were woven into matting and clothing, bundled to form canoes, and used in house and granary construction. Salt, nuts, basketry, and obsidian were obtained through trade with neighboring tribes to the east for shells, basketry, and bows obtained in turn through trade from tribes located to the west (Levy 1978).

The Plains Miwok gathered food resources as the seasons varied. As with most California tribes, they subsided heavily on the acorn, but also gathered nuts, seeds, roots, greens, berries, and mushrooms. Animal foods included tule elk, pronghorn antelope, jackrabbits, squirrels, beaver, quail, and waterfowl. Salmon was the dominant animal food resource, ranking above other river resources, such as sturgeon. Technological items of the Plains Miwok included wooden digging sticks, poles, and baskets used for gathering vegetal resources, and stone mortars, pestles, and cooking stones used for processing. Items used for obtaining animal resources included nets, snares, seines, bows, and arrows. Arrow points were made primarily of basalt and obsidian.

The Native American population in the Sacramento Valley first came into contact with Spanish explorers in the late 1700s as the Franciscan missions sought converts. Plains Miwok converts were sent to Mission San José in the early 1800s. Many labored in large ranchos awarded during the Mexican period.

During two epidemics, in 1830 and 1837, foreign diseases decimated the populations of indigenous people in the Sacramento Valley. The discovery of gold in 1848 and the ensuing Gold Rush also contributed to substantial population declines. Between 1805 and 1856, the Miwok population declined from nearly 20,000 to approximately 3,000. Surviving Miwok labored for the growing mining, ranching, farming, and lumber industries (Levy 1978).

Patwin

The plan area is within the ethnographic territory of the Southern Wintun or Patwin, who are members of the widespread Penutian language family, which was prevalent throughout California during the late precontact and historic era (e.g., 1800). Patwin are the southernmost division of Wintuan groups, a distinction primarily based on linguistic variation. Patwin are members of California Penutian linguistic stock, and they occupied the southwest portion of the Sacramento Valley, from the lower hills of the eastern North Coast Ranges to the Sacramento River, and from Princeton south to San Pablo and Suisun Bays. Patwin are comprised of numerous different tribal groups with separate dialects, but anthropologists usually separate Patwin into two primary subdivisions: Hill Patwin and River Patwin. Hill Patwin occupied the lower, eastern slopes of the southern North Coast Range and River Patwin occupied the west side of the lower Sacramento River below the mouth of the Feather River and the lower reaches of Cache Creek and Putah Creek in the Sacramento Valley (Kroeber 1925; Powers 1976).

As with most of the hunting-gathering groups of California, the "tribelet" represented the basic social and political unit. Typically, a tribelet chief would reside in a major village where ceremonial events were held. The status of such individuals was inherited patrilineal among the Patwin, although village elders had considerable power in determining who actually succeeded to particular positions.

Hunting and fishing were the responsibilities of the men in the community, who also produced the associated tool assemblage, including nets, boats, bows, and arrows. Women's tools primarily consisted of a variety of baskets of many sizes and shapes manufactured from available materials such as sedge roots and willow and redbud shoots.

Many items that could not be obtained locally were procured through an active and extensive trade network. Clam shell disk beads served as currency in the region, and the Patwin routinely imported pine nuts, seeds, bear hides, beads, and sinew-backed bows from the central Wintun; and shell beads, magnesite, salt, clams, and obsidian from the Pomo. In exchange, they exported salmon, river otter pelts, cordage, shell beads, yellow hammer headbands, and sinew-backed bows to the Pomo. In some instances, they acted as middlemen for particular items in the east-west or north-south movement of various commodities.

The expansion of missions and ranches throughout California was disastrous for the Patwin. Patwin members from southern villages were used as forced labor at the ranches and as neophytes at Mission San Francisco de Asis, Mission San Jose, and later Mission San Francisco Solano, as early as 1800. Diseases such as measles and smallpox were instrumental in reducing the population to the point that established cultural traditions and settlement systems could no longer be maintained. The lower Sacramento Valley and Delta region was an area severely impacted by western settlement. Surviving Patwin in the region either became partly assimilated into white culture or were placed on small reservations. Various population estimates attest to the rapid and almost total decline of indigenous people. Indeed, diseases introduced by Euroamericans resulted in the annihilation of nearly 75 percent of the native population. The decreased population is reflected in the 1972 U.S. Bureau of Indian Affairs census, which lists only 12 native Patwin (Cook 1955). Today many of the estimated 2,500 descendants of the Wintun/Patwin reside on the Colusa, Cortina, Grindstone Creek, Redding, and Rumsey Rancherías, as well as the Round Valley Reservation.

CONTEMPORARY NATIVE AMERICAN SETTING

Defining tribal cultural resources involves the knowledge and expertise of living California Native Americans. As the embodiment of a continuous connection between tribal history and the landscape, they are uniquely qualified to act as the interpreters and stewards of their culture, including the ability to define the significance of the material remains and landscapes of their ancestor's lifeways. Today, many descendants of Valley Nisenan, Plains Miwok, and Patwin still reside on lands once inhabited by their ancestors or on lands set aside for tribal communities by the federal government, which may or may not been traditionally inhabited by their ancestors.

Contemporary Californian Native American tribes with ancestral connections to the study area and to the Valley Nisenan and Plains Miwok heritage include the United Auburn Indian Community (UAIC), Shingle Springs Band of Miwok Indians (SSBMI), Ione Band of Miwok, and Wilton Rancheria. These tribes today maintain connection to their history and culture in a multitude of ways, including through ceremony, language and traditional knowledge instruction, community service, and tribal governance. For example, a "Big Time" is typically celebrated every

September to mark the start of autumn and acorn gathering time at Chaw'se Grinding Rock State Park in Pine Grove. This celebration includes serving traditional foods, traditional dancing, healing rituals, and worship in the roundhouse. Language and traditional skill classes are offered by most of the tribes, including by the SSBMI which has a Traditional Ecological Knowledge department to assist members with learning about respectful and traditional uses of plants and animals, and the UAIC who has a Pre-K through 8th grade school where key aspects of Indian culture and critical thinking are taught to prepare tribal members to face future challenges (Private School Review 2025; SSBMI 2025a). Tribal community service departments provide family support services to adults and children to promote the health and well-being of tribal community members and their families as well as connection to their heritage. Common services offered by all tribes include Indian Child Welfare Act advocacy and intervention, housing assistance, health care assistance, elder programs, and grants and scholarships for higher education (Ione Band of Miwok Indians 2025; SSBMI 2025a; UAIC 2025b; Wilton Rancheria 2025a). Governance on tribal lands is typically outlined by tribally prepared constitutions, codes and/or ordinances, and are carried out by tribal departments which are in turn typically overseen by the tribal council. This includes the office of Tribal Historic Preservation Officer (THPO). Because tribes retain inherent sovereign powers over their members and territory, SSBMI and the Wilton Rancheria also have Tribal Courts which serve as culturally sensitive, independent judicial forums where tribal cultural values are held at the forefront of dispute resolutions (SSBMI 2025b; Wilton Rancheria 2025b).

The contemporary Californian Native American tribes with ancestral connections to the study area and Patwin heritage is Yocha Dehe Wintun Nation. Yocha Dehe means "home by the spring water" in the Patwin's native language. This takes the Yocha Dehe Wintun Nation back to their roots, origins, and land. As inhabitants of the Capay Valley, they emphasize that their homeland is at the heart of their culture and heritage. In 2009 the name Yocha Dehe Wintun Nation was legally changed from the Rumsey Band of Wintun Indians, which was originally a name given to them by the federal government. The Yocha Dehe Wintun Nation Tribal council is the governing body of the tribe, which consists of five members elected every 3 years by members of the tribe of age 18 and older. The Cultural Resources Department creates cultural media, plans community events, supports language revitalization, and designs programs to protect historic sites. Maintaining their traditions, language, wisdom and culture of their elders alive is essential for their survival as a tribe. It reflects a promise made to future and past generations cultural practitioners; a promise that they will carry the knowledge of their traditions of their people on into perpetuity to preserve the core of they are as Native Patwin people (YDWN 2022).

This knowledge of traditions and culture are conveyed through the expertise of the traditionally and culturally affiliated California Native American tribe during consultation with lead agencies, as required by AB 52. During the consultation process, tribal cultural bearers can share information related to the project areas, such as: what event took/takes place here, and how is that event important to the Tribe; what artistic, professional, and/or ceremonial cultural tradition is represented by the resource; or how can this resource be used to teach others in the Tribe and convey Tribal values.

NATIVE AMERICAN TRIBAL CONSULTATION

Tribal Consultation

On February 6, 2025, in compliance with AB 52 requirements, SACOG sent letters to all tribal representative for El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties as indicated by the NAHC contact list. On March 4, 2025, a follow-up email was sent.

- Buena Vista Rancheria of Me-Wuk Indians
  - Jessalynn Pastran, Chairperson
  - Jesse Galvan, THPO
- Cachil Dehe Band of Wintun Indians of the Colusa Indian Community
  - Jennie Mitchum, Cultural Preservation Director
  - Wayne Mitchum Jr., Chairman

- Calaveras Band of Mi-Wuk Indians
  - Adam Lewis, Tribal Cultural Resources Assistant
  - Gloria Grimes, Chairperson
  - Debra Grimes, Tribal Cultural Resources Specialist
- Chicken Ranch Rancheria of Me-Wuk Indians
  - Monica Fox, Tribal Administrator
  - Joanna Portillo-Hsu, Environmental & Planning Manager
  - Stephanie Suess, Community & Resources Development Director
  - Cynthia Reyes, Cultural Manager
- Colfax-Todds Valley Consolidated Tribe
  - Pamela Cubbler, Vice Chairperson
  - CTVCT Preservation, Cultural Preservation Dept.
  - Clyde Prout, Chairperson
- Confederated Villages of Lisjan Nation
  - Cheyenne Gould, Tribal Cultural Resource Manager
  - Deja Gould, Language Program Manager
  - Corrina Gould, Chairperson
- Cortina Rancheria - Kletsel Dehe Band of Wintun Indians
  - Charlie Wright, Chairperson
- Grindstone Rancheria of Wintun-Wailaki
  - Ronald Kirk, Chairperson
- Guidiville Rancheria of California
  - Michael Derry, Historian
  - Bunny Tarin, Tribal Administrator
- Ione Band of Miwok Indians
  - Sara Dutschke, Chairperson
  - Jereme Dutschke, Cultural Resources Coordinator
- Jackson Rancheria Band of Miwuk Indians
  - Adam Dalton, Chairperson
  - Rolland Fillmore, Cultural Preservation Representative
- Mooretown Rancheria of Maidu Indians
  - Benjamin Clark, Chairperson
- Nashville Enterprise Miwok-Maidu-Nishinam Tribe
  - Leland Valdez, Cultural Resources
  - Cosme Valdez, Chairperson
- Nevada City Rancheria Nisenan Tribe
  - Richard Johnson, Chairman
- Pakan'yani Maidu of Strawberry Valley Rancheria
  - Tina Goodwin, Chairperson
- Round Valley Reservation/ Covelo Indian Community
  - James Russ, President
- Shingle Springs Band of Miwok Indians (Shingle Springs)
  - Kara Perry, Director of Site Protection
  - James Sarmento, Executive Director of Cultural Resources
  - Malissa Tayaba, Vice Chairperson; Director of TEK

  - Krystal Moreno, TEK Program Manager
  - Dustin Murray, Tribal Administrator
  - Regina Cuellar, Chairperson
- Susanville Indian Rancheria
  - Arian Hart, Tribal Chairman
- TSI-AKIM Maidu of the Taylorsville Rancheria
  - Richard Cunningham, Vice Chairman
  - Donald Ryberg, Chairman
  - James Moon Jr, Tribal Member
  - Ben Cunningham-Summerfield, Cultural Advisor
- Tule River Indian Tribe
  - Neil Peyron, Chairperson
- United Auburn Indian Community of the Auburn Rancheria (UAIC)
  - Josef Fore, Tribal Historic Preservation Officer
- Washoe Tribe of Nevada and California
  - Serrell Smokey, Chairperson
  - Darrel Cruz, Cultural Resources Department
- Wilton Rancheria
  - Herbert Griffin, Executive Director of Cultural Preservation
- Yocha Dehe Wintun Nation
  - Anthony Roberts, Chairperson
  - Yvonne Perkins, THPO, Cultural Resources Chairman
  - Leland Kinter, Tribal Treasurer
  - James Kinter, Tribal Secretary

A summary of events related to communication between the tribes and SACOG is provided below:

- UAIC requested consultation on February 18, 2025;
- SACOG met with UAIC and discussed the project and reviewed mitigation options on March 11, 2025;
- Shingle Springs Band of Miwok Indians requested consultation on March 13, 2025;
- SACOG met with Shingle Springs and discussed the project and reviewed mitigation options on April 2, 2025;
- Chicken Ranch Rancheria sent a "no comment" email on March 5, 2025;
- Calaveras Band of Mi-Wuk Indians sent an email deferring to local tribes on March 5, 2025; and
- Confederated Villages of Lisjan Nation sent an email deferring to local tribes on February 6, 2025.

TRIBAL CULTURAL RESOURCES

Tribal cultural resources are defined in CEQA statute Section 21074 and may include:

- **Resource Collection Location:** This is a location where Native Americans have historically gone, and are known or believed to go today, to collect resources in accordance with traditional cultural rules of practice.
- **Spiritual Location:** This is a location where Native American religious practitioners have historically gone, and are known or believed to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice.
- **Traditional Location:** This is a location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world.

- **Cemetery:** A cemetery is a location that has been selected for human burial or interment. This also includes the soil.

Additionally, different types of tribal cultural resources may also be archaeological resources; they include the following features:

- **Village Site:** Village sites are locations of continuous and concentrated habitation that typically have a large, well-developed cultural soil deposit. They may also contain burials, rock art, bedrock milling stations, or other features.
- **Burial Site:** A burial site or cemetery is a location where intentional human interments are found, either articulated or disarticulated. Burial soils and offerings are included as significant.
- **Milling Site:** This is a boulder or group of boulders or bedrock outcrops that contain at least one modified surface (mortar, slick, or metate) caused by the processing of food or other natural resources. Tribes still consider these as the "kitchens" of their ancestors.
- **Lithic Scatter:** A lithic scatter is a distribution of stone flakes and tool fragments reflecting purposeful modification of parent stone through percussion and/or pressure detachment.
- **Shell Middens:** Shell middens are locations with large amounts of marine shell that extend to an appreciable depth below ground surface.
- **Mounds:** These habitation and burial sites were constructed to be areas of high ground during seasonal flooding. Because they were maintained continuously for hundreds or thousands of years in a floodplain where soil was being seasonally deposited, these Mounds are often dozens of feet deep.
- **Rock Art:** Rock art consists of designs or design elements on rock surfaces created by surface applications (pictographs) or by etching (petroglyphs).
- **Rock Shelters:** These are natural caves or crevices in rock outcrops in which human use has left artifactual remains.
- **Cultural Objects:** Objects of cultural significance, such as hand stones or projectile points, that are not directly associated with a known cultural site.

3.17.3 Environmental Analysis

METHODOLOGY

Information related to tribal cultural resources is based on Native American consultation under AB 52 and is also informed by the provisions and requirements of State and local laws and regulations that apply to cultural resources. Because the exact extent of ground disturbance associated with the Development Pattern and transportation projects under the proposed 2025 Blueprint are unknown at this time, it is not possible to assess impacts on specific cultural resources. Accordingly, neither project-specific reviews nor field studies are feasible or necessary for this program EIR. Additionally, records searches and field studies are considered "expired" after 5 years (PRC Section 5024.1[g][4]). Therefore, it is beneficial to conduct them closer to the time of implementation and records searches and field studies have not been performed as part of this analysis.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the project would result in a potentially significant impact on tribal cultural resources if it would:

- cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe.

ISSUES NOT DISCUSSED FURTHER

All potential tribal cultural resources impacts are evaluated below.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.16-1: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource

Regional Growth and Land Use Change

This impact concerns potential direct and indirect impacts to tribal cultural resources at the regional level. A greater number of surficial and buried tribal cultural resources are more likely to have been previously recorded in urbanized and commercial areas, particularly since the enactment of CEQA in 1970, and to be found and not yet documented within rural communities, which tend to be presently undeveloped. In general, this means that development in the plan area is likely to encounter previously recorded resources in urbanized areas and previously unrecorded resources outside of existing communities.

AB 52 requires that lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation once the lead agency determines that the application for the project is complete. As detailed above in Section 3.17.2, "Environmental Setting," SACOG sent letters to all tribal representatives indicated by the NAHC for the six counties in the plan area. Only UAIC and Shingle Springs replied to the February 6, 2025, letter requesting consultation. SACOG met with both tribes to discuss the project and possible mitigation options.

As described above, PRC 21080.3.1 requires project-specific consultation. Pursuant to these CEQA requirements, lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation before the release of an EIR, negative declaration, or mitigated negative declaration. Within 14 days of a lead agency determining that it may undertake a project, the lead agency must provide formal notification, in writing, to the California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project that have requested notification of proposed projects in the lead agency's jurisdiction. If any affiliated tribe wishes to engage in consultation on the project, the tribe must respond to the lead agency within 30 days of receipt of the formal notification. The lead agency must then begin the consultation process with the tribes that have requested consultation within 30 days of receiving the request for consultation. Consultation concludes when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource, or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

If the lead agency determines that a project may cause a substantial adverse change to a tribal cultural resource, and measures are not otherwise identified in the consultation process, provisions in the PRC describe mitigation measures that, if determined by the lead agency to be feasible, may avoid or minimize the significant adverse impacts (PRC Section 21084.3[b]). Examples include:

- avoiding and preserving the resources in place, including planning and constructing to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space to incorporate the resources with culturally appropriate protection and management criteria;
- treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including:
  - protecting the cultural character and integrity of the resource,
  - protecting the traditional use of the resource, and
  - protecting the confidentiality of the resource;
- establishing permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or using the resources or places;

- protecting the resource, and
- archaeological and tribal monitoring.

Subsequent discretionary projects may be required to prepare site-specific project-level analysis to fulfill CEQA requirements, which may include additional AB 52 consultation that could lead to the identification of tribal cultural resources. Protection measures, including those identified above, may reduce direct effects by avoiding or preserving in place known tribal cultural resources through project design, and by addressing inadvertent discoveries. Indirect impacts to tribal cultural resources may be reduced to a by project-level planning designed to reduce public visibility and accessibility. Additionally, 2025 Blueprint Policy Vibrant-9 encourages tribal outreach early in the project planning process, even before AB 52 is required to be initiated. Through this early outreach, potential conflicts with tribal cultural resources may be identified and incorporated into initial project concepts, such that redesign is not required at the AB 52 consultation stage.

Direct permanent impacts to significant tribal cultural resources may result from ground disturbance associated with construction, such as grading and excavation. Excavation at depth has the potential to directly impact tribal cultural resources regardless of prior disturbance due to development. However, there would be a relatively higher potential to directly impact tribal cultural resources through excavation in previously undisturbed soil (i.e., in undeveloped portions of Established Communities and in Developing Communities) where there could be buried resources that have not been previously identified. The potential for permanent direct impacts to tribal cultural resources may be comparatively less for improvements to existing facilities and modifications to buildings because these areas have been previously disturbed. Tribal cultural resources are more likely to have been destroyed by past activities within historic urbanized and commercial areas, although this does not preclude the presence of buried tribal cultural resources that may be significant.

The location of tangible elements (e.g., cultural materials, deposits, or features) of tribal cultural resources can be hard to predict during project planning because they can be buried, resulting in their inadvertent discovery during project-related ground disturbance. The Sacramento Valley floodplains and the banks of rivers and large streams in the valley and adjacent foothills were occupied and used during the precontact periods with the result that tribal cultural resources, including human remains, are widespread and numerous within the plan area. River and stream drainages were often the prime locations for Native American village sites, fishing sites, and processing camps. Precontact sites frequently took the form of mounds raised above the natural ground surface, but the upper portions of many of these sites are no longer visible—destroyed by modern agricultural practices, land reclamation, dam and levee construction, hydraulic or dredge mining, or Euro-American settlement. Intermittent flooding has also deposited layers of alluvium and buried intact archaeological sites below grade with no surface manifestations. In the first decade of the 21st century, for example, Native American burials and artifacts were found from 7 to 12 feet below the surface during construction for a section of light rail and for a new City Hall in downtown Sacramento.

Direct permanent impacts would be significant if tribal cultural resources cannot be avoided or preserved in place by project design or redesign and are destroyed or substantially altered. Disturbance of, damage to, or substantial alteration or removal of indigenous materials or features would compromise the physical integrity and spiritual important of tribal cultural resources. This permanent direct impact may be addressed by advance project planning to ensure known tribal cultural resources are avoided and preserved in place, and by project-redesign to avoid and preserve significant tribal cultural resources discovered inadvertently during project construction.

Permanent indirect impacts may also result from potential access-related damage to tribal cultural resources when public accessibility is increased. The likelihood of unauthorized artifact collecting and destruction (intentional or unintentional) of precontact and ethnohistoric sites or features increases with ease of access. Recreational use, overland vehicle travel, and vandalism of archaeological sites degrade the integrity of these resources and can affect their eligibility to the CRHR or local registers. Ensuring appropriate measures are devised during project planning that would minimize or reduce damage to historical or unique archaeological resources may reduce indirect access-related impacts.

Transportation Network Improvements and Programs

The localized impacts associated with implementation of the proposed transportation network improvements and programs are the same as those described in the regional impacts discussion above. Transportation network improvement and programs could potentially impact tribal cultural resources due to direct impacts related to construction and operation that could result in substantial alteration or removal of a tribal cultural resource, and indirect impacts from access-related damage from construction projects and ongoing operations.

Summary

As described above, State laws require consultation with culturally affiliated tribes through the AB 52 process and establish procedures for the unanticipated discovery of Native American burials through the California Native American Historical, Cultural, and Sacred Sites Act. Although these regulations would reduce the severity of the effects, there could be a substantial adverse change in the significance of a tribal cultural resource because disturbance and destruction of the resource may still occur prior to discovery of burials during the construction of projects. Together, the potential impacts on tribal cultural resources that could result from regional growth and the transportation projects in the 2025 Blueprint include substantial alteration or removal of a tribal cultural resource and indirect regional impacts from access-related damage. This impact would be **potentially significant**.

Mitigation Measures

SACOG does not have the authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measure or other comparable measures identified by the lead agency through tribal consultation at a project level would reduce the impacts to tribal cultural resources, and agencies with jurisdiction to adopt these measures should do so (PRC Section 21081).

Mitigation Measure 3.17-1: Prepare and Implement a Worker Awareness Training Program for Tribal Cultural Resources

Prior to project-specific ground-disturbing activities, a tribal cultural resources awareness training program will be provided to all construction personnel active on the project site. A representative or representatives from culturally affiliated Native American Tribe(s) will be invited to participate in the development and delivery of the training program in coordination with a professional archaeologist meeting the United States Secretary of Interior's qualification standards for archaeology. The program will include relevant information regarding tribal cultural resources, including applicable laws and regulations, the consequences of violating said laws and regulations, protocols for resource avoidance, and protocols for discoveries, including who to contact in the event of a discovery and what to do upon the discovery of human remains. The program will also underscore the requirement for confidentiality and culturally appropriate treatment of any find of significance to Native Americans and protocols, consistent with Native American Tribal values.

Mitigation Measure 3.17-2: Halt Ground Disturbance Upon Discovery of Subsurface Tribal Cultural Resources and Evaluate Discovered Resource

During subsequent project-specific ground disturbing construction activities, if any suspected tribal cultural resources are discovered, all work shall cease within 100 feet of the find, and a tribal monitor from culturally affiliated Native American Tribe(s) shall be retained, if one is not currently on site. The tribal monitor shall determine if the find is a tribal cultural resource. The consulting THPO, or tribal monitor if the consulting tribe has no THPO, will make recommendations for further evaluation and culturally appropriate treatment of discovered Tribal cultural resources as necessary. Consultation with an archaeologist who meets the secretary of the Interior's professional qualifications for archaeology may also occur.

Treatment and Documentation:

The culturally affiliated Tribe shall consult with the Lead Agency to (1) identify the boundaries of the new tribal cultural resource and (2) if feasible, identify appropriate preservation in place and avoidance measures, including redesign or adjustments to the existing construction process, and long-term management, or 3) if avoidance is

infeasible, a reburial location in proximity of the find where no future disturbance is anticipated. Permanent curation of tribal cultural resources will not take place unless approved in writing by the culturally affiliated Tribe.

The construction contractor(s) shall provide secure, on-site storage for culturally sensitive soils or objects that are components of tribal cultural resources that are found or recovered during construction. Only Tribal Representatives shall have access to the storage. Storage size shall be determined by the nature of the TCR and can range from a small lock box to a conex box (shipping container). A secure (locked), fenced area can also provide adequate on-site storage if larger amounts of material must be stored.

The construction contractor(s) and Lead Agency shall facilitate the respectful reburial of the culturally sensitive soils or objects. This includes providing a reburial location that is consistent with the Tribe's preferences, excavation of the reburial location, and assisting with the reburial, upon request.

Any discoveries shall be documented on a Department of Parks and Recreation (DPR) 523 form within 4 weeks of the discovery and submitted to the appropriate CHRIS center in a timely manner.

If articulated or disarticulated human remains, or human remains in any state of decomposition or skeletal completeness are discovered during construction activities, the County Coroner and the culturally affiliated Tribe shall be contacted immediately. Upon determination by the County Coroner that the find is Native American in origin, the Native American Heritage Commission will assign the Most Likely Descendent who will work with the project proponent to define appropriate treatment and disposition of the burials.

Work at the discovery location cannot resume until all necessary investigation, evaluation, and treatment of the discovery under the requirements of the CEQA, specifically PRC Section 21084.3[b], have been satisfied.

Implement Mitigation Measure 3.17-3: Reduce Visibility or Accessibility of Tribal Cultural Resources

The culturally affiliated Tribe shall consult with the Lead Agency to determine whether or not implementation of a project would indirectly impact tribal cultural resources by increasing public visibility and ease of access. If so, the project sponsor and/or implementing agency shall take measures to reduce the visibility or accessibility of the tribal cultural resource to the public. Visibility of the resource can be reduced through the use of decorative walls or vegetation screening. Accessibility can be reduced by installing fencing or vegetation barriers, particularly noxious vegetation such as poison oak or blackberry bushes. It is important to avoid creating an attractive nuisance when protecting significant sites. Conspicuous walls or signs indicating that an area is restricted may result in more attempts to access the excluded area.

Significance after Mitigation

By implementation of these mitigation measures, direct impacts to unanticipated tribal cultural resources may be reduced by avoiding disturbance, preserving in place within the landscape, or returning objects to a location within the project area where they will not be subject to future impacts from the project. The destruction of a tribal cultural resource may still occur, however, and would result in a significant and unavoidable direct impact.

For projects proposing to streamline environmental review, lead agencies must conduct project-level analysis for each project to analyze whether, based on substantial evidence in the record, the proposed mitigation would appropriately reduce the adverse effects on tribal cultural resources. However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, Impact 3.17-1 would be **significant and unavoidable** for purposes of this program-level review.

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3.18 UTILITIES AND SERVICE SYSTEMS

This section describes the existing conditions (environmental and regulatory) and evaluates the availability of existing utility and infrastructure systems (water, wastewater, stormwater, electricity, and natural gas) in the plan area and the impact of the 2025 Blueprint on these systems. Potential impacts to water resources and water quality are discussed in Section 3.9, "Hydrology and Water Quality." Potential impacts to energy resources and greenhouse gas (GHG) emissions are discussed in Section 3.7, "Greenhouse Gas Emissions and Energy." In response to the notice of preparation, SACOG did not receive any comments related to utilities and service systems.

3.18.1 Regulatory Setting

DOMESTIC WATER

Federal

Safe Drinking Water Act of 1974

Safe Drinking Water Act (SDWA) (42 USC Section 300f et seq.) promulgated by Congress in 1974, and amended in 1986 and 1996, establishes a federal program to monitor and increase the safety of the nation's drinking water supply. SDWA authorizes the US Environmental Protection Agency (EPA) to set and implement health-based standards to protect against both naturally occurring and man-made contaminants in drinking water. EPA is also responsible for assessing and protecting drinking water sources; protecting wells and collection systems; making sure water is treated by qualified operators; ensuring the integrity of distribution systems; and making information available to the public on the quality of their drinking water.

Clean Water Act of 1972

Section 304 of the Clean Water Act (CWA) (33 USC Section 1251 et seq.) establishes primary drinking water standards. States are required to ensure that potable water retailed to the public meets these standards.

State

Urban Water Management Planning Act of 1983

Urban water suppliers must prepare urban water management plans (UWMP) to support their long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. Every urban water supplier that either provides over 3,000 acre-feet of water annually or serves more than 3,000 connections is required to assess the reliability of its water sources over a 20-year planning horizon considering normal, dry, and multiple dry years. This assessment is included in each UWMP, which is prepared every 5 years and submitted to the California Department of Water Resources (DWR). DWR reviews UWMPs for consistency with the Urban Water Management Planning Act of 1983 (Water Code Sections 10610–10656). The Water Conservation Act of 2009 (Water Code Section 10608 et seq.), also known as Sen7 (Stats. 2009, 7th Ex. Sess., ch. 4) (Senate Bill [SB] X7-7), and amendments to the Urban Water Management Planning Act of 1983 set a goal of reducing per capita daily water consumption by 20 percent by the year 2020.

Safe Drinking Water and Toxic Enforcement Act of 1986

Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986 (Health & Safety Code Section 25249.5, et seq.) was enacted as a ballot initiative in November 1986. Proposition 65 requires the state to publish a list of chemicals known to cause cancer or birth defects or other reproductive harm. This list, which must be updated at least once a year, has grown to include approximately 800 chemicals since it was first published in 1987.

Proposition 65 requires businesses to notify Californians about significant amounts of chemicals in the products they purchase, in their homes or workplaces, or that are released into the environment. By providing this information,

Proposition 65 enables Californians to make informed decisions about protecting themselves from exposure to these chemicals. Proposition 65 also prohibits California businesses from knowingly discharging significant amounts of listed chemicals into sources of drinking water.

The Office of Environmental Health Hazard Assessment (OEHHA) administers the Proposition 65 program. OEHHA, which is part of the California Environmental Protection Agency, also evaluates all currently available scientific information on substances considered for placement on the Proposition 65 list.

Groundwater Management Act of 1992

The Groundwater Management Act (Water Code Section 10750 et seq.), also known as Assembly Bill (AB) 3030 (Stat. 1992, ch. 947) provides guidance for applicable local agencies to develop voluntary groundwater management plans (GMP) in state-designated groundwater basins. GMPs can allow agencies to raise revenue to pay for measures influencing the management of the basin, including extraction, recharge, conveyance, facility maintenance, and water quality.

Water Supply Assessment and Water Supply Verification

SB 610 (Chapter 643, Statutes of 2001) and SB 221 (Chapter 642, Statutes of 2001) amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 (Water Code Section 10910) and SB 221 (California Government Code Section 66473.7) were passed as companion measures, which sought to promote more collaborative planning between local water suppliers and cities and counties. Both statutes require detailed information regarding water availability to be provided to the city and county decision-makers prior to approval of specified large development projects. Both statutes also require that this detailed information be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects. Both measures recognize local control and decision making regarding the availability of water for projects and the approval of projects.

Under SB 610, water supply assessments must be furnished to local governments for inclusion in any environmental documentation for projects of a specified minimum size from local public water providers with more than 3,000 service connections (as defined in Water Code Section 10912 [a]) subject to CEQA. Under SB 221 Water Code Section 10912, approval by a city or county of residential subdivisions of more than 500 dwelling units requires an affirmative written verification of sufficient water supply.

In September 2016, the Governor signed SB 1262 to amend SB 610 and SB 221 to address the relationship between California's water supply planning laws and groundwater management requirements under the Sustainable Groundwater Management Act (SGMA). SB 1262 requires that during environmental review, projects reliant on groundwater as a water source must provide additional information in its water supply assessment and negates the identification of hauled water as a water source in a water supply assessment.

Sustainable Groundwater Management Act of 2014

SGMA (Water Code Sections 10720–10737.8) provides local agencies with the tools to manage groundwater basins in a sustainable manner over a long-term horizon and allows for limited state intervention when necessary to protect groundwater resources. It requires the formation of local groundwater sustainability agencies (GSAs) that must assess conditions in their local water aquifer basins and adopt locally based management plans that address sustainable groundwater levels. SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. SGMA provides 20 years for GSAs to implement plans and achieve long-term groundwater sustainability.

California Water Plan

The 2013 California Water Plan provides a collaborative planning framework for elected officials, agencies, tribes, water and resource managers, businesses, academia, stakeholders, and the public to develop findings and recommendations and make informed decisions for California's water future. The California Water Plan, updated every 5 years, presents the status and trends of California's water-dependent natural resources; water supplies; and agricultural, urban, and environmental water demands for a range of plausible future scenarios. The California Water

Plan also evaluates different combinations of regional and statewide resource management strategies to reduce water demand, increase water supply, reduce flood risk, improve water quality, and enhance environmental and resource stewardship. The evaluations and assessments performed for the California Water Plan help identify effective actions and policies for meeting California's resource management objectives in the near term and to the year 2050. The 2013 Water Plan meets California Water Code requirements, guides state investments in innovation and infrastructure, and advances integrated water management and sustainable outcomes (DWR 2013). The Final California Water Plan Update 2023 was released in April 2024.

Safe Drinking Water Plan for California

SWRCB is responsible for the regulatory oversight of about 8,000 public water systems throughout the state. The 2020 Safe Drinking Water Plan for California includes SWRCB's assessment of the overall quality of the state's drinking water, the identification of specific water quality problems, an analysis of the known and potential health risks that may be associated with drinking water contamination in California, and specific recommendations to improve drinking water quality. The drinking water quality regulations include revised standards for several constituents. This has forced many water purveyors to shut down wells that do not meet the new water quality standards (SWRCB 2021).

Local

General Plans

Local policies related to domestic water supply are established in each jurisdiction's general plan. In general, jurisdictions have policies in place that seek to preserve the existing water supply and enhance water quality. In Policies and strategies for water supply might include relying on public water systems rather than individual wells where feasible, limiting additional contamination of groundwater and ensuring safe groundwater supply, and requiring new development to demonstrate availability of long-term reliable water supply.

Urban Water Management Plans

Local urban water suppliers are required to prepare a UWMP every 5 years to assess their water supplies and to support long-term resource planning as discussed above under state regulations.

Groundwater Sustainability Plans

SGMA required local GSAs to develop and implement groundwater sustainability plans (GSP) or equivalent alternatives to a GSP. These GSPs provide guidance for how groundwater resources in the plan area will remain sustainable in the long term consistent with the goals of SGMA. GSPs typically include an overview of the existing plan area and groundwater basin setting, sustainability indicators, and current projects and actions to achieve sustainability goals. GSAs are also required to produce annual reports that document the amounts of groundwater extracted, total water use, and surface water supply, and track the implementation of the projects and actions identified in the GSP.

WASTEWATER AND STORMWATER

Federal

Clean Water Act of 1972

Construction of wastewater and stormwater infrastructure and facilities may have impacts (erosion and sedimentation) regulated by CWA. The 1972 amendments to the federal CWA prohibit the discharge of pollutants to navigable waters from a point source unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. The CWA requires NPDES permits for stormwater discharges caused by general construction activity, industrial activity, and municipal drainage collection. The purpose of the NPDES program is to establish a comprehensive stormwater quality program to manage urban stormwater, reducing pollution of the environment as much as possible. The NPDES program involves characterizing the quality of receiving water, identifying harmful

constituents, targeting potential sources of pollutants, and implementing a comprehensive stormwater management program. In California, NPDES permits are issued by regional water quality control boards (RWQCBs).

State

Porter-Cologne Water Quality Control Act of 1969

The Porter-Cologne Water Quality Control Act (Porter Cologne Act) (Water Code Section 13000 et seq.) directs the State Water Resources Control Board (SWRCB) and RWQCBs to prepare water quality control plans (Basin Plans), establishing water quality objectives and beneficial uses for each body of water within the regional boundaries including groundwater basins. A RWQCB issues waste discharge requirements (WDRs) for discharges of privately- or publicly-treated domestic wastewater to locations other than surface water. These WDRs are usually designed to protect beneficial uses of groundwater basins but can be issued to protect surface waters in areas where groundwater is known to infiltrate into surface waters. Many municipal wastewater treatment facilities do not have NPDES permits but rather are issued WDRs for discharges to surface impoundments and percolation ponds. RWQCBs also issue waste reclamation requirements for treated wastewater used exclusively for reclamation projects such as irrigation and groundwater recharge. The Porter Cologne Act empowers the SWRCB and RWQCBs to protect the beneficial use of California waters. Thereby, it provides broader authority than offered by the federal CWA alone.

Subdivision Map Act of 1974

One of the powers granted to local jurisdictions by the Subdivision Map Act (Government Code Section 66410 et seq.) is the authority to impose drainage improvements or drainage fees and assessments. Specifically, local jurisdictions may require the provision of drainage facilities, proper grading and erosion control, dedication of land for drainage easements, or payment of fees needed for construction of drainage improvements. The types and applicable standards of the improvements may be specified in the local ordinance.

California Water Recycling Act of 1991

The California Water Recycling Act (Water Code Section 13577) established water recycling as a priority in California. The act encourages municipal wastewater treatment districts to implement recycling programs to reduce local water demands. Updates to the Water Recycling Act in 2013 prohibit the use of non-potable, recycled water in certain situations to protect public safety. Governor Newsom's August 2022 Water Supply Strategy sets goals of recycling at least 800,000 acre-feet of water per year by 2030 and 1.8 million acre-feet by 2040.

The Water Utility Infrastructure Act of 1995

The Water Utility Infrastructure Improvement Act (PRC Section 789–790) requires water-providing companies to invest proceeds from real, surplus property into water treatment and conveyance infrastructure.

Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems of 2012

SWRCB adopted Resolution No. 2012-0032, adopting the Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems and approving the supporting analysis. The policy establishes a statewide, risk-based, tiered approach for regulation and management of onsite wastewater treatment system installations and replacements, and recognizes the effectiveness of local permitting agencies.

Title 22 California Code of Regulations Division 4

Wastewater reclamation in California is regulated under Title 22, Division 4, of the CCR. The intent of these regulations is to ensure protection of public health associated with the use of reclaimed water. The regulations establish acceptable levels of constituents in reclaimed water for a range of uses and prescribe means for assurance of reliability in the production of reclaimed water. California Department of Health Services (DHS) has jurisdiction over the distribution of reclaimed wastewater and the enforcement of Title 22 regulations. The applicable RWQCB is responsible for issuing waste discharge requirements (including discharge prohibitions, monitoring, and reporting programs).

Local

General Plans

Policies related to wastewater and stormwater are included within each jurisdiction's general plan. In general, jurisdictions have policies that seek to preserve the protection of the existing water quality and minimize potential pollutants from entering the stormwater system. In addition to these general policies, jurisdictions may have more specific policies and programs that are tailored to performance objectives, including stormwater management plans or other planning documents that seek to maintain adequate levels of utility service within the respective jurisdiction.

Wastewater treatment services policies and strategies might include provisions for equal access to utilities, promoting innovative and efficient solutions for wastewater treatment, encouraging extension of sewer services to currently unserved areas, developing level of service standards, and encouraging design and operation standards that minimize impacts to environmentally sensitive areas and habitats.

Stormwater management policies and strategies might include provisions to ensure equal access to services, encourage sustainable practices for stormwater management, ensure that new developments are consistent with target levels of service for stormwater management services, adopt design standards to reduce impervious surfaces, and encourage coordination with regional stormwater management agencies. Section 3.9, "Hydrology and Water Quality," includes additional information on stormwater management policies and strategies regarding flooding and stormwater quality.

Sewer Management Plans

Planning for sewage services is undertaken by local agencies to support long-term resource planning and to ensure adequate levels of services to meet existing and future demands. In addition to federal and state regulations governing these sewer planning efforts, cities, counties, water districts, or other utility districts may provide additional requirements to ensure adequate levels of service. Many jurisdictions may include these additional requirements in the form of policies or goals in the relevant sewer management plans that would include policies to maintain adequate levels of service, goals, or planned improvements.

Wastewater and Recycled Water Management Plans

Some local jurisdictions may have wastewater or recycled water management plans in place to facilitate long-range planning efforts and ensure adequate levels of service. These plans are created by local agencies and typically include locally relevant goals, policies, allowed uses of recycled water, or even outline planned improvements to the wastewater or recycled water infrastructure.

Stormwater Management Plans and Programs

Many jurisdictions have stormwater management plans and programs. These plans and programs usually identify best management practices to reduce pollutants in stormwater runoff to the greatest extent feasible. For more information on stormwater management plans and programs, see Section 3.9, "Hydrology and Water Quality".

ELECTRICITY AND NATURAL GAS

Federal

Federal Energy Regulatory Commission of 1977

The Department of Energy Organization Act of 1977 established the US Department of Energy (DOE) that is comprised of several departments including the Federal Energy Regulatory Commission (FERC). FERC regulates the transmission and sale of electricity in interstate commerce, oversees licensing of hydroelectric projects, and provides oversight of related environmental matters.

Public Utilities Regulatory Policies Act of 1978

The Public Utility Regulatory Policies Act (PURPA) (Public Law 95-617) was passed in response to the unstable energy climate of the late 1970s. PURPA sought to promote conservation of electric energy. Additionally, PURPA created a

new class of nonutility generators, small power producers. Utilities are required to buy power from small power produces along with qualified cogenerators.

The PURPA was in part intended to augment electric utility generation with more efficiently produced electricity and to provide equitable rates to electric consumers. Utility companies are required to buy all electricity from "Qfs" (qualifying facilities) at avoided cost (avoided costs are the incremental savings associated with not having to produce additional units of electricity). The PURPA expanded participation of nonutility generators in the electricity market and demonstrated that electricity from nonutility generators could successfully be integrated with a utility's own supply. The PURPA requires utilities to buy whatever power is produced by Qfs (usually cogeneration or renewable energy).

Natural Gas Policy Act of 1978

The Natural Gas Policy Act (15 USC Section 3301 et seq.) granted FERC authority over intrastate as well as interstate natural gas production. The act established price ceilings for wellhead first sales of gas that vary with the applicable gas category and gradually increase over time.

Energy Policy Act of 2005

The National Energy Policy Act of 2005 (Public Law 109–58) contains several electricity-related provisions that:

- help ensure that consumers receive electricity over a dependable, modern infrastructure;
- remove outdated obstacles to investment in electricity transmission lines;
- make electric reliability standards mandatory instead of optional; and
- give federal officials the authority to site new power lines in DOE-designated national corridors in certain limited circumstances.

The Renewable Fuel Standard (RFS) program was created under the Energy Policy Act and established the first renewable fuel volume mandate in the United States. The program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

State

Warren-Alquist Energy Resources Conservation and Development Act of 1974

The California Energy Commission (CEC) regulates energy resources by encouraging and coordinating research into energy supply and demand problems to reduce the rate of growth of energy consumption, through the Warren-Alquist Energy Resources Conservation and Development Act (Government Code Section 25000 et seq.).

CEC is the state's primary energy policy and planning agency. Its responsibilities include forecasting future energy needs and keeping historical energy data; licensing thermal power plants 50 megawatts or larger; promoting energy efficiency through appliance and building standards; developing energy technologies and supporting renewable energy; and planning for and directing state response to energy emergencies.

CEC develops energy efficiency standards for residential and nonresidential buildings approximately every 3 years. The CEC adopted the 2022 Building Energy Efficiency Standards in August 2021.

California Renewables Portfolio Standard Program

The California Renewables Portfolio Standard was established by SB 1078 in 2002 and has been revised multiple times since then by the Legislature, most recently by SB 100 (Chapter 312, Statutes of 2018). SB 100 established new goals for the program of achieving a 50 percent renewable resources target by December 31, 2026, and a 60 percent target by December 31, 2030. It requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt-hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. SB 100 also states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to

California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045.

California Green Building Standards (Title 24, Part 6 and Part 11)

The energy consumption of new residential and nonresidential buildings in California is regulated by the State's Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). CEC updates the California Energy Code every 3 years with more stringent design requirements for reduced energy consumption. The 2022 California Energy Code is the iteration of the code that is currently enforced. The 2025 Building Energy Efficiency Standards (2025 California Energy Code) were adopted on September 11, 2024 and will go into effect on January 1, 2026. According to CEC, the 2025 California Energy Code puts particular emphasis on encouraging efficient electric heat pump technology for space and water heating in newly constructed single-family, multifamily, and select nonresidential building types, replacing end-of-life rooftop heating, ventilation, and air-conditioning (HVAC) units of a certain size with high efficiency systems, establishing electric-ready requirements for commercial kitchens and some multifamily buildings, updating solar and storage standards for assembly buildings to make clean energy available for onsite use while minimizing exports to the electrical grid, and increasing ventilation standards to improve indoor air quality in multifamily buildings.

CalGreen was added to Title 24 as Part 11, first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 California Building Standards Code). The current version is the 2022 CalGreen Code, which took effect on January 1, 2023. The CalGreen Code sets design requirements equivalent to or more stringent than those of the California Energy Code for energy efficiency, water efficiency, waste diversion, and indoor air quality. CALGreen establishes mandatory minimum green building standards and optional Tier 1 and Tier 2 more stringent provisions. Cities and counties are required by state law to enforce Title 24 but have the discretion to adopt either optional tier as mandatory or to adopt their own stricter standards. The 2025 CALGreen Code was adopted on September 11, 2024 and will go into effect on January 1, 2026. Relative to the 2022 CALGreen Code, the 2025 version proposes increased requirements for EV charging infrastructure (i.e., a higher percentage of parking spaces that must be equipped with EV chargers and more stringent requirements for the types of chargers that must be installed) in both residential and non-residential buildings. The 2025 CALGreen Code also includes updates to energy efficiency standards aimed at further reducing energy consumption in buildings and promoting the use of renewable energy sources.

Local

General Plans

Local policies related to energy are included within each jurisdiction's general plan. In general, jurisdictions have policies that seek to improve energy efficiency and stabilize energy demand. Relevant policies include working closely with utility companies on long-range planning for developing areas, supporting and encouraging the utility companies to place utilities underground in new development areas, minimizing visual intrusion through siting guidelines, mitigating biological impacts, and providing guidance for land use decisions regarding cogeneration and solar facilities, as well as conventional electric facilities. Section 3.7, "Greenhouse Gas Emissions and Energy," further addresses the regulatory framework associated with energy demand.

TELECOMMUNICATIONS

Federal

There are no federal telecommunications regulations that apply to the evaluation of impacts in this section.

State

There are no state telecommunications regulations that apply to the evaluation of impacts in this section.

Local

General Plans

Local policies related to telecommunications services are included within each jurisdiction's general plan. Some of the goals and policies related to telecommunications include working closely with utility companies on long-range planning for newly developing areas and supporting and encouraging the utility companies to place utilities underground in new development areas.

SOLID WASTE

Federal

There are no federal solid waste regulations that apply to the evaluation of impacts in this section.

State

Porter-Cologne Water Quality Control Act of 1969

New or expanded landfills must submit Reports of Waste Discharge to RWQCBs prior to landfill operations. In conjunction with the California Integrated Waste Management Board (CIWMB, now CalRecycle) approval of solid waste facility permits, RWQCBs issue Waste Discharge Orders, which regulate the liner, leachate control and removal, and groundwater monitoring systems at Class III landfills. While Waste Discharge Orders only apply to landfills, RWQCBs also regulate surface water runoff for all solid waste facilities by issuing stormwater discharge permits under the NPDES program. Separate NPDES permits are issued for the construction and operation of these facilities.

Integrated Waste Management Act of 1989

Integrated Waste Management Act (IWMA) (PRC Section 40000 et seq.), also known as AB 939 (Stats. 1989, ch. 1095), established the CIWMB and set forth aggressive solid waste diversion requirements. Under the IWMA, every city and county in California is required to reduce the volume of waste sent to landfills by 50 percent through recycling, reuse, composting, and other means. Counties are required to prepare a countywide integrated waste management plan (CIWMP). An adequate CIWMP contains a summary plan that includes goals and objectives, a summary of waste management issues and problems identified in the incorporated and unincorporated areas of the county, a summary of waste management programs and infrastructure, information about existing and proposed solid waste facilities, and an overview of specific steps that will be taken to achieve the goals outlined in the components of the CIWMP.

California Solid Waste Re-Use and Recycling Access Act of 1991

Subsequent to the IWMA additional legislation was passed to assist local jurisdictions in accomplishing the goals of the IWMA. The California Solid Waste Re-use and Recycling Access Act (PRC Sections 42900–42911) directed the CIWMB to draft a "model ordinance" relating to adequate areas for collecting and loading recyclable materials in development projects. The model ordinance requires that any new development project, for which an application is submitted on or after September 1, 1994, include "adequate, accessible, and convenient areas for collecting and loading recyclable materials." For subdivisions of single-family detached homes, recycling areas are required to serve only the needs of the home within that subdivision.

Assembly Bill 341

AB 341 (Chapter 476, Statutes of 2011) makes a legislative declaration that it is the policy goal of the state that not less than 75 percent of solid waste generated be reduced, recycled, or composted by the year 2020. It also requires specified commercial and public entities to arrange for recycling services.

Short-Lived Climate Pollutants Organic Waste Methane Emissions Reductions

In September 2016, the Governor signed into law SB 1383 (Lara, Chapter 395, Statutes of 2016), establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants in various sectors of California's economy. The new law codifies the California Air Resources Board's Short-Lived Climate Pollutant Reduction Strategy, established pursuant to SB 605 (Lara, Chapter 523, Statutes of 2014).

As it pertains to CalRecycle, SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025.

Local

General Plans

Local policies related to solid waste are included within each jurisdiction's general plan. In general, jurisdictions have policies that seek to minimize excess waste generation. In addition to these general policies, jurisdictions may have more specific policies and programs that are tailored to performance objectives.

3.18.2 Environmental Setting

WATER SUPPLY

Water supply for the plan area is provided by several local water agencies including cities, counties, districts, and water companies, as well as numerous small public and private water systems. These entities provide water supply for urban, agricultural, and other uses. Water supplies are drawn from surface water and groundwater sources, recycled water, conservation measures, and water transfers. The following overview discussion of the largest existing water supply agencies (in terms of water supply volume and population served), small water purveyors, water purveyor cooperative organizations, water consumption levels, supply and conveyance infrastructure, and end uses is provided to support the programmatic analysis of water supply.

Water Supply Agencies

Water supply agencies, each serving more than 3,000 connections, within the plan area include the following:

- California-American Water Company,
- Citrus Heights Water District,
- City of Davis Water Division,
- City of Folsom Environmental & Water Resources Department,
- City of Roseville,
- City of Sacramento Department of Utilities,
- City of Yuba City Public Works – Utilities Department,
- El Dorado County Water Agency,
- Nevada Irrigation District,
- Placer County Water Agency,
- Sacramento County Water Agency,
- Sacramento Suburban Water District,
- Sutter County Water Agency,
- Yolo County Flood Control and Water Conservation District, and
- Yuba County Water Agency.

Small Water Purveyors by County

The plan area also has many community drinking water systems that are considered small (serving fewer than 3,000 connections) with most small water systems serving fewer than 500 people. Small water systems face unique financial and operational challenges. Their small customer base often cannot develop the financial resources needed to upgrade infrastructure or to comply with changing regulations. The region also has many small agricultural water purveyors that acquire and deliver water to specific farm lands. Small water purveyors within the region include:

- **El Dorado County:** Grizzly Flats Community Services District and Kyburz Mutual Water System.
- **Placer County:** Midway Heights Community Water District and, in the Lahontan Hydrologic Region of Placer County, Squaw Valley Public Service District, Squaw Valley Mutual Water Company, and Northstar Community Services District.
- **Sacramento County:** Clay Water District, Del Paso Manor, Florin County Water District, Fruitridge Vista Water Company, Galt Irrigation District, Natomas Central Mutual Water Company, North Delta Water Agency, Omochumne-Hartnell Water District, Rancho Murieta Community Service District, and Tokay Park Water Company.
- **Sutter County:** City of Live Oak, East Nicolaus Mutual Water Company, Sutter County Waterworks District No. 1 (Sutter County 2019), and Sutter Community Service District. Several entities also supply agricultural irrigation water in Sutter County. The major sources of water are diversions from the Feather and Sacramento rivers. This is supplemented by groundwater and transfers from other water suppliers.
- **Yolo County:** Cacheville Community Service District, Colusa County Water District, Dunnigan Water District, City of Winters, Esparto Community Service District, Knights Landing Community Service District, Knights Landing Ridge Drainage District, Madison Community Service District, North Davis Meadows County Service Area, North Delta Water Agency, Wild Wings County Service Area, and Yolo-Zamora Water District (Yolo County 2017, 2021).
- **Yuba County:** Beale Air Force Base, Camp Far West Irrigation District, Camptonville Community Service District, North Yuba Water District, Plumas Mutual Water Company, Ramirez Water District, River Highlands Community Service District, and City of Wheatland (NCWA 2020).

Water Purveyor Cooperative Organizations

The scale and complexity of meeting water demand requires water purveyors to partner with other stakeholders in the region. These cooperative organizations enable their partners to pursue grant funding, share costs, and plan with greater vision. The following organizations have varying structures of self-governance, goals, and membership:

- Southeast Sacramento County Agricultural Water Authority,
- Sacramento Area Water Forum,
- Regional Water Authority,
- Sacramento Valley Water Quality Coalition,
- North State Water Alliance,
- Association of California Water Agencies, and
- Mountain Counties Water Resources Association.

Water Demand Management

The plan area supports intensive urban, suburban, industrial, and agricultural water users. This demand is met by conveying surface water through a complex infrastructure and widespread groundwater pumping. Purveyors operate according to the needs of their customers. Water suppliers that serve agriculture often have few connections but may control delivery of large volumes of untreated water. Purveyors who provide potable water treat water according to drinking water standards. To accomplish large improvement projects, and cooperatively address regional issues, water purveyors frequently form entities to determine mutually beneficial solutions for the group.

Urban

Table 3.18-1 shows the existing water consumption and service population for each urban water supplier in the plan area based on the most recent UWMP data available. As shown in able 3.18-1, the water suppliers set target per capita consumption rates. These rates were met by 26 of the 28 water suppliers in the plan area in 2020.

Table 3.18-1 Existing Consumption and Population for Urban Water Suppliers in the Plan Area

Urban Water Suppliers	Acre-Feet Consumption (2020)	Population (2020)	Consumption Rate (gallons/capita/day) (2020)	2020 Target Consumption (gallons/capita/day)
California Water Service Company - Marysville	2,012	12,289	146	201
California-American Water Company - Sacramento Main District	38,371	234,686	125	159
Carmichael Water District	8,202	37,900	193	237
Citrus Heights Water District	12,484	63,821	175	229
Davis, City of	10,488	70,963	132	172
El Dorado Irrigation District	30,014	129,056	208	241
Elk Grove Water District	6,685	45,300	137	191
Fair Oaks Water District	10,452	35,377	264	279
Folsom, City of	19,898	69,517	256	352
Galt, City of	4,781	26,006	164	177
Georgetown Divide Public Utilities District	11,366	9,333	173	167
Golden State Water Company - Cordova	14,206	44,050	288	320
Lincoln, City of	10,567	49,317	191	193
Linda County Water District	3,833	20,943	170	172
Nevada Irrigation District	9,858	52,733	167	197
Olivehurst Public Utilities District	4,241	25,697	147	167
Orange Vale Water Company	4,059	16,816	211	241
Placer County Water Agency	132,989	108,225	203	261
Rio Linda-Elverta Community Water District	2,867	15,071	170	181
Roseville, City of	32,300	140,187	203	247
Sacramento, City of	96,876	510,931	169	225
Sacramento County Water Agency	46,555	181,400	229	236
Sacramento Suburban Water District	39,913	172,061	172	206
San Juan Water District	12,545	29,680	377	413
South Feather Water Agency	6,203	16,770	257	247
West Sacramento, City of	11,668	60, 742	192	234
Woodland, City of	10,378	57,525	152	232
Yuba City, City of	14,099	70,458	179	192

Source: DWR 2025.

In addition to documenting existing water demand, every urban water supplier that provides over 3,000 acre-feet of water annually or serves more than 3,000 urban connections is required to assess the reliability of its water sources over a 20-year planning horizon in their UWMPs (as discussed above in Section 3.18.1, "Regulatory Setting"). The demand side of these forecasts are based on population projections and changes in per capita energy use anticipated to result from regulations and changes in consumer behavior. Table 3.18-2 provides the current and forecasted service populations for urban water suppliers in the plan area.

Table 3.18-2 Existing and Projected Population Growth for Urban Water Suppliers in the Plan Area, 2020 to 2045

Urban Water Suppliers	2025 Population	2030 Population	2035 Population	2040 Population	2045 Population
California Water Service Company - Marysville	12,353	12,417	12,481	12,545	12,610
California-American Water Company - Sacramento District	234,686	241,084	256,325	276,340	—
Carmichael Water District	38,200	39,000	40,100	41,200	42,300
Citrus Heights Water District	65,280	68,398	73,275	78,151	83,028
Davis, City of	74,841	78,659	82,671	86,888	91,320
El Dorado Irrigation District	134,000	139,100	144,000	149,300	154,900
Elk Grove Water District	49,200	53,100	53,800	54,500	54,800
Fair Oaks Water District	35,961	36,555	37,159	37,772	—
Folsom, City of	87,602	98,114	105,660	110,114	112,126
Galt, City of	27,956	29,907	31,857	33,808	35,758
Georgetown Divide Public Utilities District	9,833	10,360	10,916	11,501	12,118
Golden State Water Company - Cordova	50,184	56,345	67,557	68,755	69,984
Lincoln, City of	57,100	61,300	68,000	74,700	81,400
Linda County Water District	22,837	24,903	27,630	29,612	32,290
Nevada Irrigation District	53,839	54,927	56,016	57,104	—
Olivehurst Public Utilities District	32,697	39,697	43,197	46,697	50,197
Orange Vale Water Company	17,049	17,438	18,060	18,760	19,537
Placer County Water Agency	124,892	144,125	166,320	191,934	—
Rio Linda-Elverta Community Water District	15,353	15,647	15,947	16,252	16,563
Roseville, City of	151,742	170,526	193,190	193,190	193,190
Sacramento, City of	566,038	603,209	640,381	695,830	745,319
Sacramento County Water Agency-	197,027	225,054	253,081	275,698	298,314
Sacramento Suburban Water District	177,439	182,817	183,893	183,893	183,893
San Juan Water District	29,840	30,379	31,107	31,851	32,885
South Feather Water and Power Agency	17,521	18,306	19,125	19,882	20,887
West Sacramento, City of	64,449	74,570	81,120	87,999	102,015
Woodland, City of	64,139	67,726	71,513	75,513	79,735
Yuba City, City of	76,190	80,870	85,290	89,020	92,330

Source: DWR 2025.

Table 3.18-3 outlines the normal year water supply and demand for the plan area specified in the relevant agencies' UWMPs. As shown in Table 3.18-3, all water supply agencies have projected adequate supply to meet water demand during normal water years. Table 3.18-4 specifies the single dry year water supply and demand forecasts and Table 3.18-5 provides the multiple dry year water supply and demand forecasts. The UWMPs of two water suppliers (Nevada Irrigation District and City of Roseville) forecast water demand that exceeds supply during single dry years. Nevada Irrigation District also forecasts insufficient supplies during multiple dry years. During extremely dry years (also referred to as conference years), water agencies may be required to determine how best to meet water demands while still protecting and preserving water resources. This could include implementing additional water conservation measures, and/or adjusting minimum flow rates.

Table 3.18-3 Normal Year Water Supply and Demand Forecasts in the Plan Area

Urban Water Suppliers		2025 Forecast (AF)	2030 Forecast (AF)	2035 Forecast (AF)	2040 Forecast (AF)	2045 Forecast (AF)	Demand Exceeds Supply?
California Water Service Company - Marysville	Supply	1,967	1,942	1,922	1,905	1,897	No
	Demand	1,967	1,942	1,922	1,905	1,897	
California-American Water Company - Sacramento District	Supply	142,824	143,403	144,901	146,914	—	No
	Demand	31,548	34,565	36,949	39,889	—	
Carmichael Water District	Supply	43,920	43,920	43,920	43,920	43,920	No
	Demand	8,860	8,950	9,070	9,160	9,280	
Citrus Heights Water District	Supply	11,849	12,173	12,437	12,906	13,335	No
	Demand	11,849	12,173	12,437	12,906	13,335	
Davis, City of	Supply	23,725	23,725	23,725	23,725	23,725	No
	Demand	10,912	11,470	12,056	12,672	13,319	
El Dorado Irrigation District	Supply	70,800	70,800	78,300	78,300	78,300	No
	Demand	38,980	39,770	40,920	42,130	43,320	
Elk Grove Water District	Supply	13,000	13,000	13,000	13,000	13,000	No
	Demand	7,300	7,910	8,020	8,130	8,180	
Fair Oaks Water District	Supply	33,065	33,065	33,065	33,065	33,065	No
	Demand	10,531	10,614	10,701	10,792	—	
Folsom, City of	Supply	38,350	38,350	38,350	38,350	38,350	No
	Demand	20,517	22,746	24,214	25,145	25,519	
Galt, City of	Supply	5,552	5,678	5,968	6,280	6,615	No
	Demand	5,552	5,678	5,968	6,280	6,615	
Georgetown Divide Public Utilities District	Supply	21,206	21,206	21,206	21,206	21,206	No
	Demand	9,175	9,256	9,338	9,424	9,516	
Golden State Water Company - Cordova	Supply	13,605	12,949	14,301	14,662	15,032	No
	Demand	13,605	12,949	14,301	14,662	15,032	
Lincoln, City of	Supply	14,870	15,980	17,930	19,860	21,810	No
	Demand	14,870	15,980	17,930	19,860	21,810	
Linda County Water District	Supply	4,653	5,131	5,610	6,088	6,566	No
	Demand	4,046	4,462	4,878	5,294	5,709	

Urban Water Suppliers		2025 Forecast (AF)	2030 Forecast (AF)	2035 Forecast (AF)	2040 Forecast (AF)	2045 Forecast (AF)	Demand Exceeds Supply?
Nevada Irrigation District	Supply	385,942	385,942	385,942	385,942	—	No
	Demand	188,336 -205,963	192,234 -209,861	196,279 -213,906	200,324 -217,951	—	
Olivehurst Public Utilities District	Supply	6,544	6,544	6,544	6,544	6,544	No
	Demand	1,754	2,130	2,318	2,506	2,693	
Orange Vale Water Company	Supply	3,700	3,800	3,800	3,800	3,900	No
	Demand	3,700	3,800	3,800	3,800	3,900	
Placer County Water Agency	Supply	250,800	290,300	292,800	295,800	297,800	No
	Demand	174,725	184,171	197,460	226,988	253,416	
Rio Linda-Elverta Community Water District	Supply	2,876	2,953	3,026	3,092	3,153	No
	Demand	2,876	2,953	3,026	3,092	3,153	
Roseville, City of	Supply	64,482	66,055	70,543	70,543	70,543	No
	Demand	51,589	56,990	62,547	62,547	62,547	
Sacramento, City of	Supply	333,200	350,200	350,200	350,200	350,200	No
	Demand	108,432	114,809	121,186	127,564	133,941	
Sacramento County Water Agency	Supply	166,554	173,054	184,548	186,048	187,571	No
	Demand	51,208	53,274	55,246	57,124	58,952	
Sacramento Suburban Water District	Supply	93,064	93,064	93,064	93,064	93,064	No
	Demand	38,185	38,615	38,610	38,574	38,537	
San Juan Water District	Supply	11,300	11,400	11,300	11,400	11,500	No
	Demand	11,300	11,400	11,300	11,400	11,500	
South Feather Water and Power Agency	Supply	254,052	254,052	254,052	254,052	254,052	No
	Demand	63,68	66,56	69,48	72,61	75,83	
West Sacramento, City of	Supply	38,945	39,865	40,785	41,705	42,726	No
	Demand	14,628	16,720	17,390	18,260	20,400	
Woodland, City of	Supply	20,762	20,837	20,837	25,117	24,440	No
	Demand	13,198	13,975	14,716	15,497	15,645	
Yuba City, City of	Supply	29,578	29,578	29,578	29,578	29,578	No
	Demand	15,585	16,130	16,800	17,645	18,480	

Notes: AF = acre feet.
Source: DWR 2025.

Table 3.18-4 Single Dry Year Water Supply and Demand Forecasts in the Plan Area

Urban Water Suppliers		2025 Forecast (AF)	2030 Forecast (AF)	2035 Forecast (AF)	2040 Forecast (AF)	2045 Forecast (AF)	Demand Exceeds Supply?
California Water Service Company - Marysville	Supply	2,039	2,013	1,992	1,976	1,967	No
	Demand	2,039	2,013	1,992	1,976	1,967	
California-American Water Company - Sacramento District	Supply	127,862	128,439	129,937	131,950	--	No
	Demand	31,548	34,565	36,949	39,886	--	
Carmichael Water District	Supply	43,920	43,920	43,920	43,920	43,920	No
	Demand	9,303	9,389	9,524	9,618	9,744	
Citrus Heights Water District	Supply	10,072	10,347	10,572	10,970	11,352	No
	Demand	10,072	10,347	10,572	10,970	11,352	
Davis, City of	Supply	19,762	19,762	19,762	19,762	19,762	No
	Demand	10,912	11,470	12,056	12,672	13,319	
El Dorado Irrigation District	Supply	63,400	63,400	67,100	67,100	67,100	No
	Demand	40,930	41,760	42,970	44,240	45,490	
Elk Grove Water District	Supply	13,000	13,000	13,000	13,000	13,000	No
	Demand	7,665	8,036	8,421	8,537	8,589	
Fair Oaks Water District	Supply	23,718	23,718	23,718	23,718	--	No
	Demand	10,531	10,614	10,701	10,792	--	
Folsom, City of	Supply	36,600	36,600	36,600	36,600	36,600	No
	Demand	20,517	22,746	24,214	25,145	25,519	
Galt, City of	Supply	5,552	5,678	5,968	6,280	6,615	No
	Demand	5,552	5,678	5,968	6,280	6,615	
Georgetown Divide Public Utilities District	Supply	11,890	11,890	11,890	11,890	11,890	No
	Demand	9,175	9,256	9,338	9,424	9,516	
Golden State Water Company - Cordova	Supply	14,966	15,343	15,731	16,128	16,535	No
	Demand	14,966	15,343	15,731	16,128	16,535	
Lincoln, City of	Supply	14,870	15,980	17,930	19,860	21,810	No
	Demand	14,870	15,980	17,930	19,860	21,810	
Linda County Water District	Supply	4,653	5,131	5,610	6,088	6,566	No
	Demand	4,046	4,462	4,878	5,294	5,709	

Urban Water Suppliers		2025 Forecast (AF)	2030 Forecast (AF)	2035 Forecast (AF)	2040 Forecast (AF)	2045 Forecast (AF)	Demand Exceeds Supply?
Nevada Irrigation District	Supply	91,807	91,807	91,807	91,807	--	Yes
	Demand	177,436	181,723	186,173	190,621	--	
Olivehurst Public Utilities District	Supply	20,083	20,083	20,083	20,083	20,083	No
	Demand	5,383	6,537	7,114	7,691	8,265	
Orange Vale Water Company	Supply	3,885	4,000	4,000	4,000	4,100	No
	Demand	3,885	4,000	4,000	4,000	4,100	
Placer County Water Agency	Supply	107,990	120,794	122,249	123,995	--	No
	Demand	104,390	107,071	111,461	118,950	--	
Rio Linda-Elverta Community Water District	Supply	2,876	2,953	3,026	3,092	3,153	No
	Demand	2,876	2,953	3,026	3,092	3,153	
Roseville, City of	Supply	49,942	55,005	60,723	60,723	60,723	Yes
	Demand	51,589	56,990	62,547	62,547	62,547	
Sacramento, City of	Supply	333,200	350,200	350,200	350,200	350,200	No
	Demand	108,432	114,809	121,187	127,564	133,942	
Sacramento County Water Agency	Supply	93,624	100,228	112,584	114,940	118,601	No
	Demand	54,972	64,771	73,764	81,315	89,032	
Sacramento Suburban Water District	Supply	48,000	48,000	48,000	48,000	48,000	No
	Demand	38,184	38,617	38,611	38,574	38,536	
San Juan Water District	Supply	11,865	11,970	11,865	11,970	12,075	No
	Demand	11,865	11,970	11,865	11,970	12,075	
South Feather Water and Power Agency	Supply	50,686	50,686	50,686	50,686	50,686	No
	Demand	9,075	9,443	9,830	10,232	10,643	
West Sacramento, City of	Supply	26,858	27,862	28,865	29,868	30,972	No
	Demand	15,351	17,556	18,260	19,173	21,420	
Woodland, City of	Supply	20,160	20,160	20,160	24,440	24,440	No
	Demand	12,596	13,298	14,038	14,820	15,646	
Yuba City, City of	Supply	24,439	24,439	24,439	24,439	24,439	No
	Demand	15,628	16,254	16,958	17,845	18,722	

Notes: AF = acre feet.
Source: DWR 2025.

Table 3.18-5 Multiple Dry Years Water Supply and Demand Forecasts in the Plan Area

Urban Water Suppliers	Dry Year	Multiple Dry Year Supply Totals 2025 Forecast (AF)	Multiple Dry Year Supply Totals 2030 Forecast (AF)	Multiple Dry Year Supply Totals 2035 Forecast (AF)	Multiple Dry Year Supply Totals 2040 Forecast (AF)	Multiple Dry Year Demand Totals 2025 Forecast (AF)	Multiple Dry Year Demand Totals 2030 Forecast (AF)	Multiple Dry Year Demand Totals 2035 Forecast (AF)	Multiple Dry Year Demand Totals 2040 Forecast (AF)	Demand Exceeds Supply?
California Water Service Company - Marysville	First Year	2,084	2,057	2,036	2,019	2,084	2,057	2,036	2,019	No
	Second Year	2,084	2,057	2,036	2,019	2,084	2,057	2,036	2,019	No
	Third Year	2,084	2,057	2,036	2,019	2,084	2,057	2,036	2,019	No
California-American Water Company - Sacramento District	First Year	127,862	128,439	129,937	131,950	31,548	34,565	36,949	39,886	No
	Second Year	127,862	128,439	129,937	131,950	31,548	34,565	36,949	39,886	No
	Third Year	127,862	128,439	129,937	131,950	31,548	34,565	36,949	39,886	No
Carmichael Water District	First Year	43,920	43,920	43,920	43,920	9,300	9,400	9,520	9,620	No
	Second Year	25,771	25,771	25,771	25,771	9,320	9,424	9,540	9,640	No
	Third Year	25,771	25,771	25,771	25,771	9,340	9,448	9,560	9,660	No
Citrus Heights Water District	First Year	10,072	10,347	10,572	10,970	10,072	10,347	10,572	10,970	No
	Second Year	10,072	10,347	10,572	10,970	10,072	10,347	10,572	10,970	No
	Third Year	10,072	10,347	10,572	10,970	10,072	10,347	10,572	10,970	No
Davis, City of	First Year	23,757	23,757	23,757	23,757	10,912	11,470	12,056	12,672	No
	Second Year	20,795	20,795	20,795	20,795	10,912	11,470	12,056	12,672	No
	Third Year	19,762	19,762	19,762	19,762	10,912	11,470	12,056	12,672	No
El Dorado Irrigation District	First Year	63,400	63,400	63,400	63,400	40,930	41,760	42,970	44,240	No
	Second Year	59,400	59,400	63,100	63,100	41,100	42,000	43,220	44,490	No
	Third Year	55,300	55,300	56,600	56,600	41,270	42,240	43,470	44,740	No
Elk Grove Water District	First Year	13,000	13,000	13,000	13,000	7,670	8,310	8,420	8,540	No
	Second Year	13,000	13,000	13,000	13,000	7,793	8,432	8,442	8,562	No
	Third Year	13,000	13,000	13,000	13,000	7,916	8,554	8,464	8,584	No
Fair Oaks Water District	First Year	23,718	23,718	23,718	23,718	10,531	10,614	10,701	10,792	No
	Second Year	23,718	23,718	23,718	23,718	10,531	10,614	10,701	10,792	No
	Third Year	23,718	23,718	23,718	23,718	10,531	10,614	10,701	10,792	No
Folsom, City of	First Year	36,600	36,600	36,600	36,600	20,517	22,746	24,214	25,145	No
	Second Year	36,220	36,220	36,220	36,220	20,517	22,746	24,214	25,145	No
	Third Year	34,470	34,470	34,470	34,470	20,517	22,746	24,214	25,145	No
Galt, City of	First Year	5,552	5,678	5,968	6,280	5,552	5,678	5,968	6,280	No
	Second Year	5,552	5,678	5,968	6,280	5,552	5,678	5,968	6,280	No
	Third Year	5,552	5,678	5,968	6,280	5,552	5,678	5,968	6,280	No
Georgetown Divide Public Utilities District	First Year	11,890	11,890	11,890	11,890	9,175	9,256	9,338	9,424	No
	Second Year	11,890	11,890	11,890	11,890	9,180	9,261	9,343	9,429	No
	Third Year	11,890	11,890	11,890	11,890	9,185	9,266	9,348	9,434	No
Golden State Water Company - Cordova	First Year	14,966	15,343	15,731	16,128	14,966	15,343	15,731	16,128	No
	Second Year	15,040	15,420	15,810	16,209	15,040	15,420	15,810	16,209	No
	Third Year	15,116	15,497	15,889	16,290	15,116	15,497	15,889	16,290	No
Lincoln, City of	First Year	14,870	15,980	17,930	19,860	14,870	15,980	17,930	19,860	No
	Second Year	14,870	15,980	17,930	19,860	14,870	15,980	17,930	19,860	No
	Third Year	14,870	15,980	17,930	19,860	14,870	15,980	17,930	19,860	No
Linda County Water District	First Year	4,653	5,131	5,610	6,088	4,046	4,462	4,878	5,294	No
	Second Year	4,653	5,131	5,610	6,088	4,046	4,462	4,878	5,294	No
	Third Year	4,653	5,131	5,610	6,088	4,046	4,462	4,878	5,294	No

Urban Water Suppliers	Dry Year	Multiple Dry Year Supply Totals 2025 Forecast (AF)	Multiple Dry Year Supply Totals 2030 Forecast (AF)	Multiple Dry Year Supply Totals 2035 Forecast (AF)	Multiple Dry Year Supply Totals 2040 Forecast (AF)	Multiple Dry Year Demand Totals 2025 Forecast (AF)	Multiple Dry Year Demand Totals 2030 Forecast (AF)	Multiple Dry Year Demand Totals 2035 Forecast (AF)	Multiple Dry Year Demand Totals 2040 Forecast (AF)	Demand Exceeds Supply?
Nevada Irrigation District	First Year	179,143	179,143	179,143	179,143	183,751	188,038	192,488	196,936	Yes
	Second Year	176,630	176,630	176,630	176,630	183,751	188,038	192,488	196,936	Yes
	Third Year	381,346	381,346	381,346	381,346	212,714	217,001	221,451	225,899	No
Olivehurst Public Utilities District	First Year	20,083	20,083	20,083	20,083	5,383	6,537	7,114	7,691	No
	Second Year	20,083	20,083	20,083	20,083	5,383	6,537	7,114	7,691	No
	Third Year	20,083	20,083	20,083	20,083	5,383	6,537	7,114	7,691	No
Orange Vale Water Company	First Year	3,300	4,000	4,000	4,000	3,885	4,000	4,000	4,000	No
	Second Year	3,300	4,000	4,000	4,000	3,300	4,000	4,000	4,000	No
	Third Year	3,300	4,000	4,000	4,000	3,300	4,000	4,000	4,000	No
Placer County Water Agency	First Year	138,998	156,156	157,551	159,225	104,390	107,071	111,461	118,950	No
	Second Year	138,998	156,156	157,551	159,225	104,390	107,071	111,461	118,950	No
	Third Year	138,998	156,156	157,551	159,225	104,390	107,071	111,461	118,950	No
Rio Linda-Elverta Community Water District	First Year	2,876	2,953	3,026	3,092	2,876	2,953	3,026	3,092	No
	Second Year	2,876	2,953	3,026	3,092	2,876	2,953	3,026	3,092	No
	Third Year	2,876	2,953	3,026	3,092	2,876	2,953	3,026	3,092	No
Roseville, City of	First Year	64,482	66,055	70,543	70,543	51,589	56,990	62,547	62,547	No
	Second Year	59,582	61,155	65,643	65,643	51,589	56,990	62,547	62,547	No
	Third Year	59,582	61,155	65,643	65,643	51,589	56,990	62,547	62,547	No
Sacramento, City of	First Year	333,200	350,200	350,200	350,200	108,432	114,809	121,187	127,564	No
	Second Year	333,200	350,200	350,200	350,200	109,707	116,085	122,462	128,840	No
	Third Year	333,200	350,200	350,200	350,200	110,983	117,360	123,738	130,115	No
Sacramento County Water Agency	First Year	115,811	123,270	138,026	142,782	54,972	64,771	73,764	81,315	No
	Second Year	103,433	110,415	123,921	127,427	54,972	64,771	73,764	81,315	No
	Third Year	91,056	97,560	109,816	112,072	54,972	64,771	73,764	81,315	No
Sacramento Suburban Water District	First Year	48,000	48,000	48,000	48,000	38,184	38,617	38,611	38,574	No
	Second Year	48,000	48,000	48,000	48,000	38,184	38,617	38,611	38,574	No
	Third Year	48,000	48,000	48,000	48,000	38,184	38,617	38,611	38,574	No
San Juan Water District	First Year	11,870	11,970	11,870	11,970	11,870	11,970	11,870	11,970	No
	Second Year	11,738	11,990	11,850	11,990	11,738	11,990	11,850	11,990	No
	Third Year	11,606	12,010	11,830	12,010	11,606	12,010	11,830	12,010	No
South Feather Water and Power Agency	First Year	61,059	61,059	61,059	61,059	9,075	9,443	9,830	10,232	No
	Second Year	203,697	203,697	203,697	203,697	9,075	9,443	9,830	10,232	No
	Third Year	98,938	98,938	98,938	98,938	9,075	9,443	9,830	10,232	No
West Sacramento, City of	First Year	32,455	33,625	34,794	35,963	15,351	17,556	18,260	19,173	No
	Second Year	31,392	32,478	33,564	34,651	15,792	17,697	18,442	19,622	No
	Third Year	26,858	27,862	28,865	29,868	16,233	17,837	18,625	20,072	No
Woodland, City of	First Year	20,762	20,837	20,837	25,117	13,198	13,975	14,715	15,497	No
	Second Year	20,762	20,837	20,837	25,117	13,198	13,975	14,715	15,497	No
	Third Year	20,762	20,837	20,837	25,117	13,198	13,975	14,715	15,497	No
Yuba City, City of	First Year	26,363	26,363	26,363	26,363	15,682	16,254	16,958	17,845	No
	Second Year	23,290	23,290	23,290	23,290	15,796	16,395	17,135	18,020	No
	Third Year	21,366	21,366	21,366	21,366	15,911	16,535	17,312	18,195	No

Notes: AF = acre feet.
Source: DWR 2025.

Agriculture

The Sacramento Valley is an agricultural region of national significance. This success was predicated on abundant surface water supplies, and agriculture is the largest water user in the plan area. For a description of existing agricultural resources in the plan area and analysis of the agricultural resources impacts of the 2025 Blueprint, see Section 3.2, "Agricultural and Forestry Resources." Unlike urban water supplies, water supplied for agricultural use is not subject to treatment.

Water Supply and Conveyance

Water supply systems obtain water from several sources including surface water (lakes and rivers), groundwater, and treated and recycled wastewater. Potable water supply comes from surface water and groundwater sources. As shown in Table 3.18-6 there are 16 major lakes and reservoirs in the plan area that are used for water supply.

Table 3.18-6 Major Lakes and Reservoirs in the Plan Area

Major Lake or Reservoir	Location	Capacity (acre-feet)
American River Watershed		
Folsom Lake	Convergence of the North and South Forks of the American River	977,000
Lake Clementine	Convergence of the North and Middle Forks of the American River	14,700
Lake Natoma	Main branch of the American River	9,000
Union Valley Reservoir	South Fork American River	266,369
Hell Hole Reservoir	Rubicon River Drainage	207,600
Loon Lake	Rubicon River Drainage1	69,306
Slab Creek	South Fork American River	16,600
Stumpy Meadows	Pilot Creek	20,000
Ice House Reservoir	South Fork Silver Creek	43,496
Caples Lake	Caples Creek	22,340
Silver Lake	Silver Fork of the South Fork	8,640
Bear River Watershed		
Camp Far West Reservoir	Bear River	104,500
Rollins Reservoir	Bear River	66,000
Middle Sierra Watershed		
Sly Park Reservoir/Jenkinson Lake	Cosumnes River	41,000
Yuba River Watershed		
New Bullard's Bar Reservoir	Yuba River	966,000
Englebright Reservoir	Yuba River	70,000

Source: DWR 2019a; DPR 2019.

Major Water Projects

The Central Valley Project (CVP) and the State Water Project (SWP) produce the majority of California's surface water supplies, coordinate operations to provide flood control and meet water delivery commitments, cooperate to meet water quality objectives of the Sacramento-San Joaquin Delta, and manage water rights held by the federal and state government for the benefit of their wholesale contractors. Additional information is presented below regarding these major water projects and how they serve water suppliers in the plan area.

Central Valley Project

The US Bureau of Reclamation (Reclamation) is responsible for developing and conserving most water resources in the western United States. Its functions include municipal and industrial water supply (e.g., CVP); hydroelectric power generation; agricultural irrigation water supply; water quality improvement; flood control; river navigation; river regulation and control, including fish and wildlife enhancement; recreation management; and research. In the plan area, Reclamation purchases water from various water agencies for the CVP, oversees some levees, operates Folsom reservoir, and oversees several canals. Water conveyance projects associated with Central Valley Project in the plan area include Auburn-Folsom South Unit, Delta Division, and Sacramento Canals Unit (USBR 2019).

State Water Project

The SWP delivers water from Northern California to more than 27 million users in the lower Sacramento Valley, San Francisco Bay area, San Joaquin Valley, and Southern California. DWR Oroville Field Division operates and maintains the facilities extending from Feather River lakes in Plumas County to the Oroville-Thermalito Complex on the Feather River. DWR operates the facility for water supply, power generation, recreation, fish and wildlife enhancement, and salinity control. In the plan area, only Yuba City holds long-term contracts for SWP supply (DWR 2019b).

Other Water Projects

Water stored and released from Clear Lake and Indian Valley Reservoir into Cache Creek is diverted by the Yolo County Flood Control and Water Conservation District for irrigation in Yolo County. In Sutter County and in western Placer County, South Sutter Water District supplies irrigation water from Camp Far West Reservoir on the lower Bear River. South Sutter Water District also purchases surface water from Nevada Irrigation District (NID) to supplement irrigators' groundwater supplies. NID's water supplies come from its reservoir on the Yuba-Bear River system. Yuba River supplies have also been developed by Yuba County Water Agency, which is New Bullards Bar Reservoir. The Sacramento metropolitan area is served by more than 20 water purveyors and is also the largest urban surface water user in the region (NID 2019). Within Sacramento County, the City of Sacramento relies primarily on surface water (approximately 80 to 90 percent); water purveyors in unincorporated areas use both surface water and groundwater. The City of Folsom takes surface water from Folsom Lake.

Surface Water Supply

Surface water supplies are managed through complex infrastructure and water rights systems. Many water purveyors in this region do not directly hold a water right to divert from a stream but receive water as a contractor from a water district or from the federal or state government through the CVP or SWP, respectively. Several agencies (South Sutter Water District, San Joaquin Water District, Placer County Water Agency, NID) are currently constructing interties between their systems to facilitate water transfers, increase water delivery reliability, and allow for operational flexibility in the systems, particularly between ground water and surface water supplies (DWR 2014).

Groundwater Supply

Groundwater contributes about a third of the total water supply in the Sacramento Hydrologic Region. Most groundwater extraction in the region (75 percent) occurs for agricultural water use, and approximately 25 percent of all groundwater extraction in the region is for urban water use and provides about half of the urban water needs (DWR 2013).

Recycled Water

Water demand for non-potable uses, such as landscape and agricultural irrigation, can use recycled water. The EchoWater project, completed by SacSewer in 2023, provides up to 3.5 mgd of recycled water that is distributed to neighboring parks, used to water landscaping, and is also used in other commercial and industrial uses (SacSewer 2024a). In addition to the EchoWater Treatment plant, the City of Roseville Environmental Utilities owns and operates the Dry Creek and Pleasant Grove Wastewater Treatment Plants that produce recycled water for industrial and landscaping use. The Dry Creek Wastewater Treatment Plant has a dry weather flow of up to 18 mgd and a wet weather flow of up to 45 mgd (City of Roseville 2020). The City of Roseville completed an expansion of the Pleasant Grove Wastewater Treatment Plant in 2023, which increased the plants' capacity from 9.5 to 12 mgd (CWEA 2023). The region currently does not have any treatment plants that recycle wastewater for potable use.

Conservation

All water purveyors in the plan area have instituted water conservation strategies and programs. These programs include water survey programs for residential customers, residential plumbing retrofits, system water audits, leak detection and repair, high-efficiency washing machine rebate programs, public information campaigns, school education programs, ultra low–flow toilet replacement program, and conservation pricing.

Water Transfers

Water transfers are exempt from CEQA for short-term (year-to-year) water sale agreements, are negotiated directly between willing sellers and willing buyers, and are approved by DWR. They allow water to be sold by a water rights holder with temporary excess supply and purchased by a buyer in need of a short-term supply. Typically, the transferred water originates from a different location and with a different beneficial use than the destination and purpose of the purchased water right. Short-term water transfers have been common since the early 1990s, are especially important in dry years, include primarily water sellers from the plan area, and will likely increase over time as water supplies become more constrained and demands increase due to population growth and climate change.

WASTEWATER AND STORMWATER

Once water is used, wastewater is typically discharged into a sewer system and treated in a wastewater treatment plant (WWTP) before being discharged into a body of water or reused for landscaping, irrigation, or industrial use. Wastewater is generally classified as domestic, industrial, or storm according to its origin. Wastewater may contain dissolved organic and inorganic materials, suspended solids, and microorganisms, including bacteria and viruses. Domestic wastewater is generated through normal activity in homes, businesses, and institutions. Wastewater from landscaping activities may also fall under domestic waste. Wastewater from toilets and urinals is often referred to as black water, while the other types of domestic wastewater are often called grey water.

The character of industrial wastewater depends on the type of industry using the water. Some industrial wastewater can be treated in the same manner as domestic wastes. Others may contain toxic substances or high concentrations of organic materials or solids that complicate treatment. In such cases, the industrial plant may have to pretreat its wastewater to remove these pollutants or reduce them to treatable levels before they are accepted into a publicly owned treatment facility.

Although stormwater has its own collection process, it often goes through a WWTP, despite its generally low pollutant level. Large volumes of stormwater can interfere with treatment efficiency by causing too much dilution of the wastewater and overloading the hydraulic systems of the plant.

Wastewater Treatment and Disposal

Table 3.18-7 shows the agencies responsible for wastewater collection and treatment in the plan area. There are three basic types of treatment systems employed in the plan area. Municipal treatment systems serve incorporated areas and may, in some cases, also serve unincorporated areas that are within the jurisdiction's sphere of influence or otherwise connected with the jurisdiction. Community services districts' (CSD's) systems usually serve unincorporated areas with concentrated population centers, and on-site wastewater treatment systems collect, treat, and disperse wastewater generated by a home or a business in unincorporated areas not served by a municipal system or a CSD. One of the most common types of on-site wastewater treatment systems are septic systems, but these types of systems also include systems such as aerated treatment units and drip distribution systems.

Table 3.18-7 Wastewater Treatment in the Plan Area by County

County	Agencies Responsible for Wastewater Collection and Treatment
El Dorado County	El Dorado Irrigation District, Georgetown Divide Public Utility District, City of Placerville
Placer County	City of Roseville, City of Auburn, Tahoe-Truckee Sanitation Agency, Placer County
Sacramento County	Sacramento Area Sewer District, Sacramento Regional County Sanitation District, City of Sacramento, City of Folsom, City of Galt
Sutter County	City of Yuba City, City of Live Oak, Sutter County Water Works District #1, Sutter County Rio Ramaza Community Services District
Yolo County	City of Davis, City of Winters, City of Woodland, Yoho Yocha Dehe Wintun Nation, University of California, Davis
Yuba County	City of Linda, City of Olivehurst, City of Wheatland

Source: City of Auburn 2024; City of Davis 2019; City of Folsom 2019; City of Galt 2019; City of Live Oak 2019; City of Placerville 2019; City of Roseville 2019a; City of Winters 2019; City of Woodland 2019; City of Yuba City 2019; El Dorado Local Agency Formation Commission 2022; El Dorado Irrigation District 2019; Georgetown Divide Public Utility District 2019; Placer County 2019; Sacramento County 2019; University of California 2019; Yocha Dehe Wintun Nation 2019, Yuba Water Agency 2019.

Wastewater Treatment Plants

El Dorado County Wastewater Treatment

Wastewater in El Dorado County is treated by El Dorado Irrigation District, Georgetown Divide Public Utility District, and City of Placerville. El Dorado Irrigation District operates and maintains four wastewater treatment facilities that treat an average of 5 million gallons of wastewater per day to tertiary levels. The treatment plants produce recycled water used to irrigate front and back yards, as well as commercial and public landscaping (El Dorado Irrigation District 2019). Georgetown Divide Public Utility District operates one community disposal system in the Auburn Lake Trails Subdivision. The remainder of the homes in the service area use on-site wastewater treatment systems (Georgetown Divide Public Utility District 2019). The City of Placerville operates the Hangtown Creek Water Reclamation Facility, which discharges into Hangtown Creek just above the confluence with Weber Creek(City of Placerville 2012).

Placer County Wastewater Treatment

Most incorporated areas of Placer County are served by WWTPs. Rural, outlying, and low-density areas are served by individual treatment systems. The cities of Roseville, Auburn, Colfax, and Lincoln and Tahoe-Truckee Sanitation Agency provide municipal wastewater treatment in their communities (Placer County 2008). The City of Roseville owns and operates the Dry Creek and Pleasant Grove Wastewater Treatment Plants, both of which produce recycled water. The City of Roseville also provides wastewater service to the South Placer Municipal Utility District and southern Placer County. The City of Auburn owns and operates its own wastewater treatment and collection system that serves the municipal boundaries of the city. The facility provides tertiary treatment and is permitted to discharge a maximum of 1.65 mgd into the Auburn Ravine Creek. The City of Colfax owns and operates an Aeromod WWTP that is designed to treat up to 0.5 mgd (City of Colfax 2023). The City of Lincoln collects regional wastewater from Placer County Sewer Maintenance District No. 1, which is pumped from the Mid-Western Regional pump station in Norh Auburn. The Tahoe-Truckee Sanitation Agency collects sewage from the Squaw Valley Public Service District and the Northstar Community Services District. The 9.6 million gallon per day plant provides primary and secondary treatment (Tahoe-Truckee Sanitation Agency 2019).

Placer County also operates and maintains five wastewater treatment facilities that serve unincorporated areas of North Auburn, Granite Bay, Loomis, western Placer County (Dry Creek), Livoti, Sunset Area Plan, Sheridan, Applegate, and Blue Canyon.

Sacramento County Wastewater Treatment

Sacramento Area Sewer District (SacSewer) is the primary wastewater service provider in Sacramento County, providing service to more than 1.6 million residential, commercial, and industrial customers in the plan area (SacSewer 2024b). SacSewer owns and operates the Sacramento Regional Wastewater Treatment Plant that serves unincorporated Sacramento County, and the cities of Citrus Heights, Elk Grove, Folsom, Rancho Cordova,

Sacramento, and West Sacramento. The City of Galt Utilities Division also provides wastewater service in Sacramento County. The City of Galt operates a WWTP on Twin Cities Road that has a capacity of 3 mgd. The treated wastewater is reclaimed for irrigation of crops during the dry season and discharged to Laguna Creek during the wet season.

Sutter County Wastewater Treatment

Privately owned onsite wastewater treatment systems provide for the treatment and disposal of wastewater throughout much of Sutter County. The cities of Yuba City and Live Oak, and the communities of Robbins and Rio Ramaza are the only areas with sanitary sewer collection systems and wastewater treatment facilities within the county. Sutter County operates Water Works District No. 1, which is responsible for providing wastewater services for the communities of Robbins and Rio Ramaza. The wastewater system is composed of a septic tank effluent pumping system that treats an average 10 million gallons of wastewater per year using primary and secondary treatment (Sutter County 2019). The City of Yuba City Utilities Division operates a wastewater treatment facility that processes up to 6.5 mgd (City of Yuba City 2019). The City of Live Oak has gravity sewer lines, pump stations, and force mains (City of Live Oak 2010).

Yolo County Wastewater Treatment

In Yolo County, municipal wastewater treatment is provided for the cities of Davis, Winters, and Woodland. The City of Davis and City of Winters WWTPs provide primary and secondary treatment, while the City of Woodland facility provides tertiary treatment. These municipal facilities serve unincorporated areas of Yolo County where the unincorporated area is within the sphere of influence of the cities and where annexation is anticipated. Esparto, Madison, and Knights Landing have primary/secondary treatment. Country Fair Mobile Home Park in Dunnigan has primary treatment, as do several other businesses in Dunnigan. The Yocha Dehe Wintun Nation also has its own WWTP that provides tertiary treatment to their casino. The unincorporated community of Wild Wings has a small tertiary treatment plant. The University of California, Davis also operates a WWTP (University of California 2019).

Although some unincorporated areas are served by municipal systems, the majority of the wastewater generated in the unincorporated areas of the county is treated through the use of on-site systems, which generally rely upon septic tanks and on-site disposal using leach fields and other types of soil absorption systems. The waste is pumped into septic trucks and then taken to a disposal facility. Typically, waste is taken to Vallejo Regional WWTP in Solano County or to a private facility in the City of Lincoln in Placer County.

Finally, some unincorporated areas are served by CSDs. CSDs usually treat wastewater by collecting it through a system of pipes that transfers it to a WWTP (Yolo County 2009).

Yuba County Wastewater Treatment

In Yuba County, there are four small treatment plants that serve the communities of Marysville, Linda, Olivehurst, and Wheatland. These WWTPs provide secondary treatment. Most rural Yuba County residents are served by on-site systems. The City of Marysville operates a WWTP that has a 5 mgd capacity that serves the City of Marysville and Linda (City of Marysville 2019). The Olivehurst Public Utility District operates a tertiary WWTP, permitted for 3 mgd discharge (OPUD 2017). The City of Wheatland's WWTP has a 3.8 mgd capacity.

Stormwater

Stormwater is collected in municipal systems within urbanized areas of the plan area and conveyed to rivers and streams, in accordance with state water quality regulations. Stormwater services are provided by municipal public works departments, community service districts, reclamation districts, or other special districts. In addition to stormwater collection services, many agencies in the plan area coordinate comprehensive stormwater management systems. For example, the Sacramento Stormwater Quality Partnership, formed by Sacramento County, and the cities Sacramento, Citrus Heights, Rancho Cordova, Elk Grove, Galt, and Folsom, is a cooperative partnership that aims to educate the public about stormwater runoff issues and encourage pollution prevention (Sacramento Stormwater Quality Partnership 2019). Stormwater infrastructure is addressed in more detail in Section 3.9, "Hydrology and Water Quality."

ELECTRICITY AND NATURAL GAS

Most power in California is derived from natural gas. In 2023, California generated 77 percent of power in-state and imported the remaining 23 percent, mainly from the southwest area of the nation. The state's electricity system included 281,140 total gigawatt hours (GWh) of power that year (CEC 2023). For additional discussion of the environmental setting for energy consumption in the plan area, see Section 3.7, "Greenhouse Gas Emissions and Energy."

Energy Service Providers

Pacific Gas and Electric Company (PG&E), Sacramento Municipal Utility District (SMUD), Pioneer Community Energy, Valley Clean Energy, and Roseville Electric provide natural gas and electricity services to the plan area. Energy service providers usually complete improvements for an area to meet customer demand as the need arises. Within the plan area, PG&E provides electric service to El Dorado, Sutter, Yolo, and Yuba counties, and large portions of Placer County west of the Tahoe Basin. PG&E also provides natural gas service to the entire Sacramento metropolitan area. PG&E obtains electricity from natural gas, fossil fuels, nuclear, and hydroelectric and eligible renewable resources. In 2023, 100 percent of the electricity PG&E delivered to its customers came from GHG-free sources through carbon-free nuclear power (53 percent), large hydroelectric power (13 percent) and a combination of eligible renewable resources (34 percent) including solar, wind, and small hydroelectric power (PG&E 2024).

SMUD supplies electric service to Sacramento County and to a 5-square-mile area in the Dry Creek/West Placer area west of the City of Roseville in Placer County. SMUD obtains electricity from a variety of sources, including hydro-generation, natural gas fired generators, cogeneration plants, advanced and renewable technologies (such as wind, solar, and biomass and landfill gas power), and power purchased on the wholesale market. In 2021, SMUD adopted a 2030 Zero Carbon Plan, through which SMUD has committed to obtain more electricity from renewable sources.

Pioneer Community Energy began as a partnership between the Placer County and the cities of Auburn, Colfax, Lincoln, Rocklin, and the Town of Loomis. Pioneer's service area includes most of Placer County, except for those covered by SMUD and Roseville Electric or in the Tahoe Basin. Pioneer supplies the electricity that is then delivered by PG&E, who owns, operates, repairs, and services the poles and wires (Pioneer Community Energy 2019).

Valley Clean Energy is the locally governed electricity provider for unincorporated Yolo County, as well as the cities of Davis and Woodland. Valley Clean Energy purchases power and PG&E then delivers the electricity and maintains the power lines (Valley Clean Energy 2019).

The City of Roseville supplies its own electrical service to the City of Roseville through Roseville Electric, a municipal-owned utility. Roseville Electric generates power from the Roseville Energy Park, a 160-MW natural gas fire plant that generates enough energy to meet 40 percent of the city's needs. The remainder of Roseville's electricity is purchased

Electricity

Power Plants

Energy resources are converted to power through processes performed in an industrial facility or power plant before being distributed by service providers for public use. There are 112 power plants located within and providing energy for the region. Most power plants in the plan area are solar (50), followed by hydroelectric (39), oil and/or gas (15), waste-to-energy landfill gas or biomass (7), and wind (1). Power plants are most commonly located in Sacramento (47), Placer (27), and El Dorado (16) counties. The majority of these facilities provide power for the PG&E service area, although nearly half of the plants are located in Sacramento County and provide power for SMUD. Table 3.18-8 provides information on the capacity, type, and service area of power plants.

Table 3.18-8 Power Plants in the Plan Area

Plant Name	Capacity (MW)	Facility Type	City or Area	Operator Company
Aerojet I (3.6MW) Solar Plant	3.6	Solar	Sacramento	Altus Power America Inc
Aerojet II (2.4MW) Solar Plant	2.4	Solar	Sacramento	Altus Power America Inc
Alta	1	Hydroelectric	Placer	Pacific Gas & Electric (PG&E)
Amir Development Company	1.1	Solar	Yolo	Not Available
Boessow (Van Connett Solar Farm)	3	Solar	Sacramento	Sacramento PV Energy LLC
Browns Valley (Rated 0.995MW)	1.3	Hydroelectric	Yuba	Browns Valley Irrigation District
Camino	308	Hydroelectric	El Dorado	Sacramento Municipal Utility District (SMUD)
Camp Far West	6.8	Hydroelectric	Placer	SMUD
Campbell Soup Supply Company LLC	2	Solar	Sacramento	Not Available
Carson Ice CG	119.5	Natural Gas	Sacramento	Central Valley Financing
Cemex Construction Materials Pacific LLC	1	Solar	Yolo	Not Available
Cemex Madison	1	Wind	Yolo	Foundation Windpower
Chili Bar	7.02	Hydroelectric	El Dorado	SMUD
City of Yuba	1	Solar	Sutter	Not Available
Co. Inc. #21 Walgreens	1	Solar	Yolo	Not Available
Colgate	315	Hydroelectric	Yuba	Yuba County Water Agency
Combie North (550 kW)	0.3	Hydroelectric	Placer	Nevada Irrigation District
Cosumnes Power Plant	500	Natural Gas	Sacramento	SMUD
Deadwood Creek	2	Hydroelectric	Yuba	Not Available
Drum #1	55.5	Hydroelectric	Placer	PG&E
Drum #2	49.5	Hydroelectric	Placer	PG&E
Dutch Flat #1	22	Hydroelectric	Placer	PG&E
El Dorado	20	Hydroelectric	El Dorado	El Dorado Irrigation District
FAA Norcal TRACON	1	Solar	Sacramento	Not Available
Feather River Peaker	48.1	Natural Gas	Sutter	Gilroy Energy Center, LLC
Fish Power (NPCap = 0.15MW - No Reporting RQD)	0.15	Hydroelectric	Yuba	Yuba County Water Agency
Folsom	198.72	Hydroelectric	Sacramento	US Bureau of Reclamation
Foods Inc. United Natural	1	Solar	Placer	Not Available
French Meadows	15	Hydroelectric	Placer	Placer County Water Agency

Plant Name	Capacity (MW)	Facility Type	City or Area	Operator Company
Granite Construction Company	1.1	Solar	Sacramento	Not Available
Grasslands EPWF	2.5	Solar	Yolo	Yolo County General Services
Grasslands RES-BCT	2.5	Solar	Yolo	Yolo County General Services
Green Acres Solar Facility 1	3	Solar	Sacramento	OL Elk Grove Trust a Delaware Statutory Trust
Green Acres Solar Facility 2	1	Solar	Sacramento	OL Elk Grove Trust a Delaware Statutory Trust
Greenleaf 1 Inc.	60.7	Natural Gas	Sutter	Calpine Greenleaf Inc
Greenleaf 2 Inc.	50	Natural Gas	Sutter	Greenleaf Plants 1&2
Grundman-Wilkinson Solar Farm (Bruceville Road)	18	Solar	Sacramento	Sacramento PV Energy LLC
Halsey	11	Hydroelectric	Placer	PG&E
Hedge PV (S0090)	0.2	Solar	Sacramento	SMUD
Hell Hole	0.73	Hydroelectric	Placer	Placer County Water Agency
Intel Corporation	1	Solar	Sacramento	Not Available
Intel Corporation - Folsom Carport Phase 1	1.1	Solar	Sacramento	Tesla Inc.
Intel Corporation - Folsom Carport Phase 2	1	Solar	Sacramento	Not Available
Intel Corporation - Folsom Carport Phase 3	6.45	Solar	Sacramento	Tesla Inc.
Jaybird	154	Hydroelectric	El Dorado	SMUD
Jones Fork	11.5	Hydroelectric	El Dorado	SMUD
Kiefer Landfill Gas-to-Energy Facility	9.15	WTE - Landfill Gas	Sacramento	County of Sacramento Department of Waste Management & RecycliNatural Gas
Kiefer Landfill Phase II (KLG2)	6	WTE - Landfill Gas	Sacramento	County of Sacramento
KiNatural Gass Beach - Retired 12/31/2002	16.5	OIL	Placer	Sierra Pacific Resources
Kost (Fleshman Solar Farm)	3	Solar	Sacramento	Sacramento PV Energy LLC
Lincoln Landfill - WPWMA	4.86	WTE - Landfill Gas	Placer	Energy 2001 Inc
Lincoln Solar Millenium Fund LLC_(Lincoln Solar #A)	1.5	Solar	Placer	Not Available
Lincoln Solar Millenium Fund LLC_(Lincoln Solar #B)	1.5	Solar	Placer	Not Available
Lincoln Solar Millenium Fund LLC_(Nicholas Solar #C)	1.5	Solar	Placer	Not Available
Lomo Cold Storage LLC	1	Solar	Sutter	Not Available
Loon Lake	82	Hydroelectric	El Dorado	SMUD
McClellan	74.2	Natural Gas	Sacramento	SMUD
Middle Fork American River	116	Hydroelectric	Placer	Placer County Water Agency

Plant Name	Capacity (MW)	Facility Type	City or Area	Operator Company
MM Yolo Power LLC Facility	2.85	WTE - Landfill Gas	Yolo	Yolo County General Services
Monticello	11.5	Hydroelectric	Yolo	Solano Irrigation District
Narrows 2	55	Hydroelectric	Yuba	Yuba County Water Agency
Newcastle	11.5	Hydroelectric	Placer	PG&E
Nilsen Farms	1.1	Solar	Sacramento	Not Available
Nimbus	13.5	Hydroelectric	Sacramento	US Bureau of Reclamation
Ostrom Road	3.2	WTE - Landfill Gas	Yuba	G2 Energy (Ostrom Road) LLC
Oxbow	6	Hydroelectric	Placer	Placer County Water Agency
Point Pleasant (Lawrence Solar Farm)	1	Solar	Sacramento	Sacramento PV Energy LLC
Pristine Solar Fund 8 Sutter PGE LLC_(2179_Smotherman)	0.5	Solar	Sutter	Not Available
Putah Creek Solar Farm	2	Solar	Yolo	Not Available
Ralston	79	Hydroelectric	Placer	Placer County Water Agency
Rancho Seco Solar	10.9	Solar	Sacramento	D. E. Shaw
Rancho Seco Solar II	160	Solar	Sacramento	D. E. Shaw
Rancho Seco Solar PV - Retired 3/31/2013	2	Solar	Sacramento	SMUD
RE Bruceville Solar 1	6.65	Solar	Sacramento	Canadian Solar
RE Bruceville Solar 2	6.65	Solar	Sacramento	Canadian Solar
RE Bruceville Solar 3	6.65	Solar	Sacramento	Canadian Solar
RE Dillard Road 1	3.99	Solar	Sacramento	Canadian Solar
RE Dillard Road 2	3.99	Solar	Sacramento	Canadian Solar
RE Dillard Road 3	3.99	Solar	Sacramento	Canadian Solar
RE Dillard Road 4	0.53	Solar	Sacramento	Canadian Solar
RE Kammerer Road 1	6.65	Solar	Sacramento	Canadian Solar
RE Kammerer Road 2	6.65	Solar	Sacramento	Canadian Solar
RE Kammerer Road 3	6.65	Solar	Sacramento	Canadian Solar
RE McKenzie 1	5	Solar	Sacramento	Canadian Solar
RE McKenzie 2	5	Solar	Sacramento	Canadian Solar
RE McKenzie 3	5	Solar	Sacramento	Canadian Solar
RE McKenzie 4	5	Solar	Sacramento	Canadian Solar
RE McKenzie 5	5	Solar	Sacramento	Canadian Solar

Plant Name	Capacity (MW)	Facility Type	City or Area	Operator Company
RE McKenzie 6	5	Solar	Sacramento	Canadian Solar
Rio Bravo Rocklin	24.3	WTE - Biomass	Placer	IHI Power Services Corp
Robbs Peak	29.5	Hydroelectric	El Dorado	SMUD
Rock Creek L.P.	3.6	Hydroelectric	El Dorado	Hydroland
Roseville	50.4	Natural Gas	Placer	City of Roseville
Roseville Energy Park (REP)	267.2	Natural Gas	Placer	City of Roseville
Sacramento Campbell Soup SPA	173.9	Natural Gas	Sacramento	SMUD
Sacramento Regional County Sanitation District	3.73	Solar	Sacramento	Tesla Inc.
Sacramento SCA	193.4	Natural Gas	Sacramento	SMUD
Siemens Industry Inc.	1	Solar	Sacramento	Not Available
Slab Creek	0.4	Hydroelectric	El Dorado	SMUD
SMUD HQ**		Natural Gas	Sacramento	SMUD
SPI - Lincoln	19.2	WTE - Biomass	Placer	Sierra Pacific Industries Inc
Strata Roof 1	1	Solar	Sacramento	Strata Clean Energy
Sutter Energy Center	551.8	Natural Gas	Sutter	CCFC Sutter Energy, LLC
Tony's Fine Foods	1	Solar	Yolo	Not Available
U.S. National Leasing LLC (Depot Park)	3	Solar	Sacramento	Not Available
Union Valley	46.7	Hydroelectric	El Dorado	SMUD
University of California Davis - Indefinite Shutdown	3	Natural Gas	Yolo	UC Davis Operations & Maintenance Utilities Division
US General Service Administration - Sacramento	1.38	Solar	Sacramento	Tesla Inc.
White Rock	230	Hydroelectric	El Dorado	SMUD
White Rock/South Fork Powerhouse	2.68	Hydroelectric	El Dorado	SMUD
Wildflower Solar 1	13	Solar	Sacramento	Wildflower Solar I, LLC
Wise	17.1	Hydroelectric	Placer	PG&E
Woodland Biomass Power Ltd	28	WTE - Biomass	Yolo	DTE Energy Services
Yolo County Solar Project	1	Solar	Yolo	Yolo County General Services
Yuba City Cogeneration Partners LP	49	Natural Gas	Sutter	Wellhead Services Inc
Yuba City Peaker	48.1	Natural Gas	Sutter	Gilroy Energy Center, LLC

Source: CEC 2024.

Natural Gas

Natural gas is primarily used for electric power generation and as a residential, commercial, and industrial energy resource. PG&E, SMUD, and the Western Area Power Administration have natural gas transmission pipelines located throughout the plan area. Natural gas pipelines are located at the intersection of White Rock and Latrobe roads and along Green Valley Road from the county line to Salmon Falls Road in El Dorado County. In Placer County, natural gas pipelines are generally located near SR 65 through Sheridan to Lincoln and along I-80 from Roseville to Auburn. Pipelines are located generally near I-80 and along south I-5 in Sacramento, with additional east-west running pipelines in the northern, central, and southern city. In Sutter County, natural gas pipelines are located adjacent to north SR 99 and near SR 20 with an additional pipeline running east-west in the southern portion of the county. There are also natural gas pipelines near I-5, I-80, and SR 113, and running east-west from the community of Yolo to West Sacramento in Yolo County. Finally, in Yuba County, pipelines are located generally near SR 70, SR 65, South Beale Road, and Warren Shingle Road (US Pipeline and Hazardous Materials Safety Administration 2018).

Liquid energy pipelines transport many other energy sources, including crude oil, ethanol, liquid natural gas (regasified after transport), and liquid petroleum gas also known as propane (US Pipeline and Hazardous Materials Safety Administration 2018). Though they make up a much smaller proportion of California's electricity system, liquid energy resources like propane can be used as an additional energy source in areas without access to natural gas distribution lines. For more information about the transport of crude oil and other hazardous liquids, see Section 3.8, "Hazards and Hazardous Materials."

There are many petroleum oil and other liquid energy transmission pipelines within the plan area. There are transmission pipelines located adjacent to I-80 and SR 65 in Placer County. Transmission pipelines in Sacramento County are located adjacent to Bradshaw Road from US 50 to SR 99 and following SR 99 to the county line. There is also a pipeline running from the Sacramento International Airport to I-80 in Yolo County. In Sutter County, transmission pipelines follow northern SR 99. There are transmission pipelines located adjacent to SR 84 and I-80 in Yolo County. In Yuba County, transmission pipelines are located adjacent to SR 65 and continue along South Beale Road to Beale Air Force Base (US Pipeline and Hazardous Materials Safety Administration 2018). There are no petroleum refineries located in the plan area, as the majority of the state's refineries are located in the San Francisco Bay Area, Los Angeles, and other parts of the Central Valley. However, there are three refined products terminals, which receive petroleum products by tanker, barge, pipeline, rail, or truck in Sacramento County (CEC 2019).

TELECOMMUNICATIONS SERVICES

Telecommunications services in any given area can vary widely as they are mainly a privately-owned enterprise and are offered by a variety of companies with different service capacities. The number of providers offering the service, the type of service available, and the transmission speed of the service all affect the quality of telecommunications.

Telephone and Cellular Phone

Local phone service is provided primarily by AT&T, Inc., although a number of telephone companies operate in the plan area as well, including Frontier Communications Corporation, T-Mobile, Verizon, and Consolidated Communications (NTIAFCC 2024). Long distance telephone service is provided by several carriers, including AT&T and T-Mobile among others. Providers use a combination of underground lines and above ground cellular towers to provide telephone service to the plan area.

Cable Television and Internet

Internet services are provided by AT&T, Comcast, Consolidated Communications, and Integra Telecom, Inc., in addition to satellite and other providers. Internet service may be provided through mobile (i.e., cellular phone), wireless (Wi-Fi), hotspots (i.e., wireless local area network), phone line (i.e., integrated services digital network), or broadband (i.e., DSL, cable) connections. Cable television is primarily provided by Comcast Cable, AT&T, and Consolidated Communications through cable or satellite connections (NTIAFCC 2018).

Cable fibers and copper wires are generally co-located and installed concurrently with other utility infrastructure. This infrastructure is usually installed underground within new development to reduce visual and aesthetic impacts and any potential safety hazards. However, fiber optic networks generally serve larger developed areas where demand offsets the high cost of installing the fiber optics. Additionally, television and internet services can be provided through satellite connections and Wi-Fi networks that allow electronic devices to communicate using radio waves rather than a wire.

Broadband refers to a high-speed connection to the internet that is always on, as opposed to other connections (e.g., dial-up) that need to be turned on with every use. The region is fully served by mobile broadband except in the mountainous areas in the western tip of Yolo County, the middle of Placer County, and north and south El Dorado County.

SOLID WASTE

Solid waste generally refers to garbage, refuse, or other solid discarded materials generated through residential, commercial, and industrial activities. CalRecycle identifies 10 categories of solid waste: paper, glass, metal, electronics, plastic, other organic waste, construction and demolition waste, household hazardous waste, special waste, and mixed residue. Household hazardous waste generally consists of items used in a home that require special disposal because they contain chemicals that may be harmful, such as antifreeze, batteries, light bulbs, used motor oil and filters, and paint.

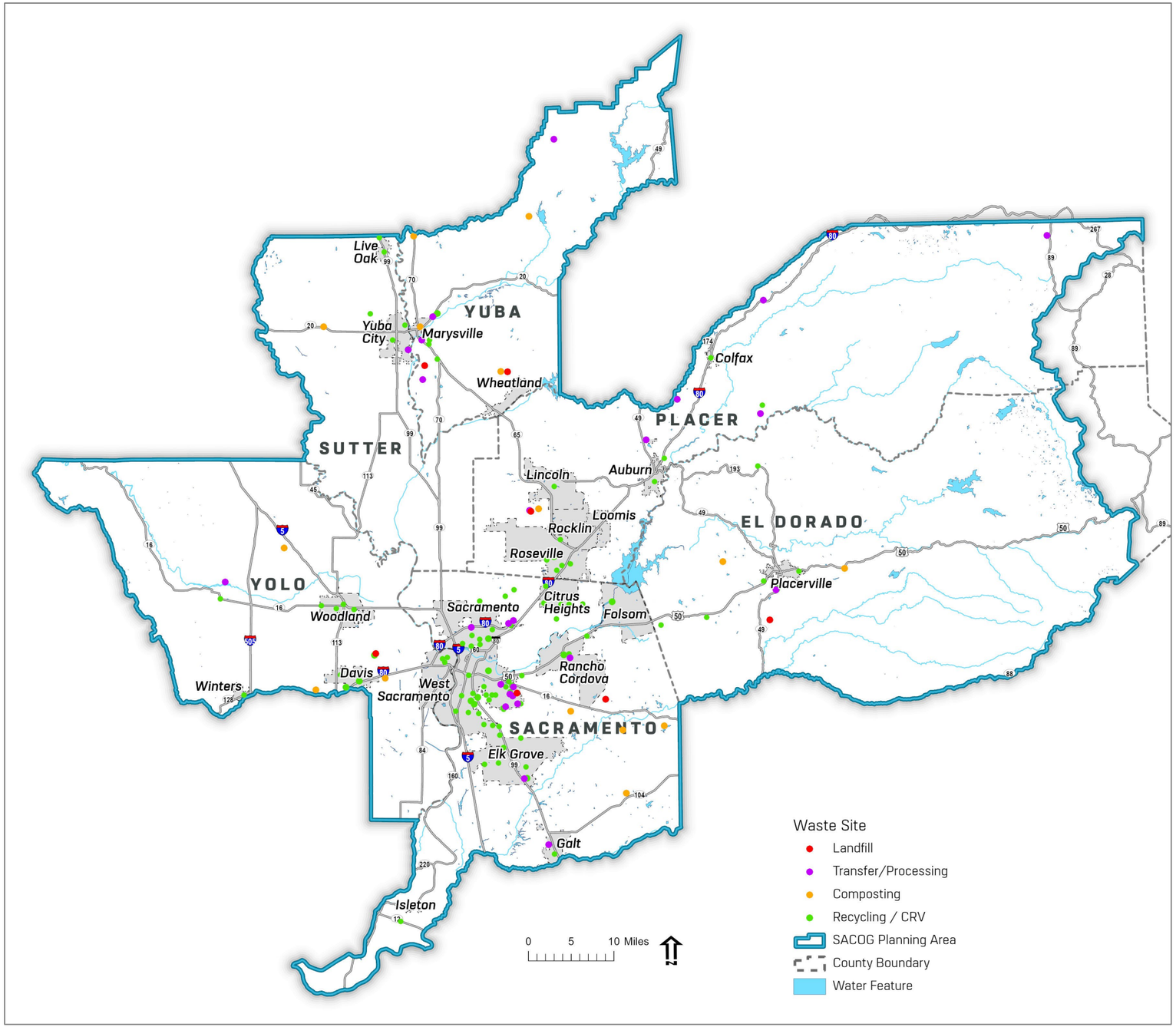
Solid waste generation is measured by disposal and diversion. Solid waste is collected and disposed of in landfills that fall into three classes based on the types of waste accepted. Class I sites may accept hazardous and nonhazardous wastes (for a discussion of hazardous waste see Section 3.8, "Hazards and Hazardous Materials"). Class II sites may accept "designated" and nonhazardous wastes. Class III sites may accept nonhazardous wastes. Solid waste diversion includes programs and practices such as waste prevention and source reduction, recycling, reuse, and composting that reduce the total amount of waste that requires disposal.

Solid Waste and Recycling Service Providers

County governments generally address solid waste management by both providing solid waste treatment facilities within their own jurisdictions and by exporting waste outside the plan area. Sacramento and El Dorado counties, and to a more limited extent, Placer County, export some waste to landfills in Nevada. Waste disposal service within the plan area is provided by the following:

- El Dorado County,
- City of Placerville,
- Western Placer Waste Management Authority,
- Sacramento County Department of Waste Management and Recycling,
- Yuba-Sutter Regional Waste Management Authority, and
- Yolo County.

In the plan area, there are 30 solid waste transfer facilities where municipal solid waste is transferred from collection vehicles to long-distance transport vehicles for shipment to landfills or other treatment or disposal facilities (CalRecycle 2025). Table 3.18-9 shows major landfill information for facilities within the plan area. Figure 3.18-1 shows the location of these major landfills, as well as transfer and recycling facilities in the region.



Source: Prepared by SACOG in 2025.

Figure 3.18-1 Major Waste Disposal Sites in the Plan Area

Table 3.18-9 Major Landfills in the Plan Area[1]

Landfill Name	Location	Capacity (CY)	Used (CY)	Percent Used	Remaining (CY)	Percent Remaining	Estimated Closure
L&D Landfill Co	8635 Fruitridge Road Sacramento CA, 95826	20,500,000	17,384,100	84%	3,115,900	16%	2030
Recology (Norcal) Ostrom Road LF Inc.	5900 Ostrom Road Wheatland CA, 95692	43,467,231	4,244,231	10%	39,223,000	90%	2080
Sacramento County (Kiefer) Landfill	12701 Kiefer Boulevard Sloughhouse CA, 95683	117,400,000	15,100,000	4%	102,300,000	87%	2080
Western Regional Landfill	3195 Athens Road, Ap #17-060-02 Lincoln CA, 95648	36,350,000	7,256,181	20%	29,093,819	80%	2058
Yolo County Central Landfill	44090 County Road 28H Woodland, CA 95776	49,035,200	14,435,963	29%	33,140,373	67%	2124

Note: CY = cubic yards.

[1] Table is reflective of major landfills in the plan area. Smaller disposal sites are described in the text but not included in the table. Landfills outside the plan area that are used by plan area jurisdictions are described in the text but not included in the table.

Source: CalRecycle 2025.

Solid Waste Generation and Disposal

In 2019, which is the latest year that per capita waste data is available, disposal of more than 2.3 million tons of waste was reported for the plan area. Table 3.18-10 shows the waste generation total in tons and the waste generation rate (tons per capita) for the counties within the plan area.

Table 3.18-10 Existing Solid Waste Generation (in tons) and per Capita (2019)

County	Disposal (tons)	Export (tons)	Total (tons)	Per Capita Waste (tons per capita)
El Dorado	161,780	40,287	202,067	1.24
Placer	323,315	19,108	342,423	0.87
Sacramento	1,476,538	83,646	1,560,184	0.99
Yolo	195,221	2,958	198,179	0.88
Yuba-Sutter	168,944	0	168,944	0.92
Total	**2,325,798**	**145,999**	**2,471,797**	**0.98**

Note: Data for Yuba-Sutter is waste originating from the Yuba/Sutter Regional Waste Management Authority which covers both counties.

Source: CalRecycle 2019a, CalRecycle 2019b.

Waste Recycling and Diversion

Reducing the overall amount of waste generated at the source, as well as recycling waste that is disposed of, reduces the amount of solid waste that ends up in landfills. Diversion can be achieved by reducing the amount of materials that may be disposed of (e.g., minimizing product packaging), and by reusing materials that may generally be disposed of or by recycling. Most paper products and metals, glass, and plastics can be recycled. Special facilities are available to recycle construction, demolition, and inert debris, to chip and grind greenwaste, and/or compost certain greenwaste, food, and paper products. There are 36 facilities that receive and process recycled materials in the region (Figure 3.18-1).

3.18.3 Environmental Analysis

METHODOLOGY

This analysis includes a program-level assessment of impacts related to the following utilities: water supply, wastewater, solid waste, electricity, natural gas, and telecommunications.

The assessment of available water supply considers regional demand and supply of water based on analyses available in adopted UWMPs for urban water suppliers in the plan area. The projections included in the UWMPs inform where additional demand may exceed the capacity of water districts as well as which water districts may have additional capacity. This Draft EIR summarizes information from the UWMPs for existing forecasted shortage in long-term supplies that would need to be met by imported water or additional water conservation, reuse, and recycling. Impacts related to water facilities consider whether new or expanded water supply facilities such as storage, conveyance, distribution, or treatment infrastructure may be required to serve areas where future water demand is projected to exceed supply.

Impacts related to wastewater, solid waste, electricity, natural gas, and telecommunications are qualitatively evaluated to determine whether the 2025 Blueprint would increase demand for these public utilities to the degree that construction of new or expanded facilities would be required to maintain adequate service levels. The analysis considers the role of existing regulations in addressing impacts to these utility systems and evaluates the effects of the projected land use pattern and planned transportation network improvements.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the project would have a significant adverse effect related to utilities and service systems if it would:

- have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;
- require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
- 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; or
- generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; and/or fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.18-1: Have Insufficient Water Supplies Available to Serve the Project and Reasonably Foreseeable Future Development During Normal, Dry and Multiple Dry Years

Regional Growth and Land Use Change

Population, employment, and housing growth would increase the demand for surface and groundwater. Under the 2025 Blueprint, demand would increase for both potable and reclaimed (recycled) water. However, as described in greater detail in Section 5.1, "Growth Inducement," the 2025 Blueprint does not induce population growth. The Development Pattern was identified to accommodate the Regional Growth Projection that was developed based on existing zoning and other land use policies. The 2025 Blueprint is intended to help shape growth patterns in the region, leading to better efficiency, higher sustainability, and more compact and mixed patterns of land use that are

better served by transit and other mode choice options. As required by law, the 2025 Blueprint identifies areas within the region sufficient to house the population of the region; therefore, it is tailored to meet population growth. All land use decisions remain at the local level with the 28 member cities and counties.

Similarly, demand forecasts in UWMPs are informed by local jurisdiction's population and development projections. At the regional level, the total population forecasts for the plan area are similar for the 2025 Blueprint and for the combined service areas of the urban water providers. The 2025 Blueprint would also not impair the implementation of water conservation programs for new and existing development that are incorporated into UWMP demand estimates. For these reasons, increases in potable water demand are expected to be consistent with the demand forecasts included in local UWMPs.

In fact, per capita water demand could be slightly reduced compared to the estimates in the adopted UWMPs because the regional growth pattern in the 2025 Blueprint emphasizes development in Center and Corridor Communities and Establish Communities. The smaller lot size of infill multifamily housing tends to reduce per capita water consumption for landscape irrigation. In addition, adding accessory dwelling units, converting a single-family home to a multiplex, splitting a single lot into two, and other forms of infill development do not add new landscaped area to the region (SPUR 2021: 12).

UWMPs are regularly updated to assess the reliability of water sources over a 20-year planning period and account for several sources of water including surface water, groundwater, imported water, recycled water, and water exchanges. As shown in Tables 3.18-3 through Table 3.18-5, the urban water suppliers in the plan area are projected to provide water supplies that adequately serve projected demand for their projected service populations through 2040 during normal years. As shown in Table 3.18-4, many urban water suppliers in the plan area are projected to provide adequate water supplies that serve projected demand for their projected service populations during a single dry year through the year 2045. However, the City of Roseville and NID's water demand is expected to exceed available supplies for all years during a single dry year independent of implementation of regional growth patterns under the 2025 Blueprint. As summarized in Table 3.18-5, many urban water suppliers in the plan area are projected to provide water supplies that adequately serve projected demand for their projected service populations through 2040 during multiple dry years, with the exception being NID. NID is not expected to meet demands for the first or second dry years until 2040, but is expected to adequately serve projected demand in the third dry year through the year 2040.

NID and the City of Roseville expect demand to exceed supply during one or more water supply scenarios (i.e., normal year, single dry year, multiple dry years) before the time horizon of the 2025 Blueprint (2050). Developing Communities in Lincoln and Roseville would contribute to this forecast increase in demand. Agencies with projected water supplies unable to meet projected demand of their service populations are expected to implement measures (e.g., conservation measures, supply projects, treatment facilities) to accommodate projected water demand of forecasted growth. In addition, development projects would be required to comply with Senate Bill 610 and Senate Bill 221 (Water Code Sections 10910 and 10912), as described above under Water Supply Assessment and Water Supply Verification. See Section 3.9, "Hydrology and Water Quality," for additional discussion of regulations pertaining to groundwater, as well as an analysis of groundwater resource impacts. Local jurisdictions must work with water purveyors and project developers to ensure that existing demand is met and that future demand, as included in the relevant UWMP, has been taken into account when considering new development.

Therefore, the population increase accommodated by the projected Development Pattern of the 2025 Blueprint could generate water demand in exceedance of the projected water supply contained in several UWMPs in the plan area. However, this exceedance is predicted in the UWMPs of the respective water agencies. Furthermore, the need for will-serve letters and compliance with Senate Bills 610 and 221 would reduce these impacts. There is still potential that there could be insufficient water supply for the regional growth projected in portions of the plan area during some water years.

Transportation Network Improvements and Programs

The ongoing construction, operation, and maintenance of existing and new transit facilities, bicycle and pedestrian facilities, highway, and roadway facilities would result in incremental increases in water demand during construction, such as for concrete mixing, dust suppression, and landscaping establishment. Construction activities, including those associated with the planned transportation improvements identified in the 2025 Blueprint, are not likely to use potable water. During operations and maintenance, such as for landscape irrigation, restrooms, and drinking fountains, the increases in demand are anticipated to be small on a per-project basis; however, the collective demand from all of the projects taken together could increase water demand in excess of water supply agencies' projected supplies or could be located in areas where water demand is projected to exceed available supplies.

To accommodate increases in demand created by new projects, jurisdictions must coordinate with water purveyors to ensure that sufficient supply is available. The enforcement of these regulations by local jurisdictions would ensure that a water supply assessment is prepared to demonstrate that sufficient water would be available to serve development projects before their approval. Additionally, water purveyors that are subject to the Urban Water Management Planning Act are required to provide projected demand updates to the state every 5 years through updates to their UWMPs. If such updates indicate that water supply is no longer sufficient to meet water demand, strategies to increase water supply include, but are not limited to, contracts with other water purveyors, water imports, and conservation efforts.

Summary

Based on the data in the applicable UWMPs, there is a potential for regional growth to result in a demand for potable water that exceeds supply. As described above, this is projected to occur without implementation of the 2025 Blueprint, which would not result in additional population growth beyond that forecast in the UWMPs. In fact, the regional growth pattern supported by the 2025 Blueprint could reduce per capita demand by supporting infill development. Nonetheless, there could be insufficient water supplies available to serve the plan area, based on the UWMPs that identify a shortfall for future growth. Therefore, this impact would be **potentially significant**.

Mitigation Measures

SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following measure or other comparable measure identified by the lead agency at a project level would reduce the impacts to utilities and service systems, and agencies with jurisdiction to adopt these measures can and should do so (PRC Section 21081).

Mitigation Measure 3.18-1: Implement Water Conservation Measures

The implementing agency shall implement measures regarding water conservation, efficiency, capture, and reuse identified by water suppliers in state, regional, and local plans, laws, and policies, and in their own plans and ordinances during planning, design, and project-level environment review, construction, operations, and maintenance activities. Measures include, but are not limited to, the following:

- Install drip or other water-conserving or weather-based irrigation systems for landscaping.
- Coordinate with the relevant water service provider to ensure that the provider has adequate water supplies to accommodate the increase in demand. If the water service provider servicing the project site is found to have inadequate water supplies, improvements and or mitigation measures shall be identified in each project's CEQA documentation.
- Design future projects to reduce the use of potable water for landscape irrigation (xeriscaping). These design components could include drought-tolerant plantings for landscaping, water-efficient irrigation systems, the capture and use of rainwater
- Design future projects to reduce the use of potable water through the use of water-conserving fixtures such as dual-flush toilets, waterless urinals, reduced flow faucets, and EnergyStar rated appliances.

- For projects located in an area with existing reclaimed water conveyance infrastructure and excess reclaimed water capacity, these future projects shall use reclaimed water for non-potable uses, such as landscape irrigation, ornamental water features, concrete mixing, and dust control. For projects in a location planned for future reclaimed water service, projects should install dual plumbing systems in anticipation of future use.
- Adopt Tier 1 or Tier 2 Cal Green standards as mandatory local requirements.

Significance after Mitigation

Due to uncertainty in individual project conditions, the extent to which the mitigation measure above would reduce impacts to water supply is unknown at this time. Such details are not available at the plan level. Additionally, because SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation, this impact would be **significant and unavoidable**.

Impact 3.18-2: Require or Result in the Relocation or Construction of New or Expanded Water, Wastewater, Treatment or Storm Water Drainage, Electric Power, Natural Gas, or Telecommunications Facilities, the Construction or Relocation of Which Could Cause Significant Environmental Effects

Regional Growth and Land Use Change

Implementation of the 2025 Blueprint would result in increased demand for utility and service systems, including wastewater treatment, electric power, natural gas, and telecommunication systems. The regional growth pattern in the 2025 Blueprint emphasizes infill development located within the existing Center and Corridor Communities and Established Communities. This development would connect to existing water infrastructure, wastewater conveyance and treatment systems, and electrical power, natural gas, and telecommunications infrastructure and reduce the number of new facilities needed. However, the 2025 Blueprint also allocates growth to the Developing Communities of the region, just outside existing developed areas. While these areas may have some existing utility and service system infrastructure serving existing developments, the amount of growth allocated to these areas would likely result in the construction of additional facilities or expansion of existing facilities to provide utility service to newly developed areas.

Implementation of the 2025 Blueprint would result in a higher concentration of residents within existing service areas and, thus, would result in increased demand for wastewater treatment, electric power, natural gas, and telecommunications in these areas. If future development results in exceedance of capacity for these facilities, new, expanded, or relocated facilities could be required. In most cases, utility improvements have already been identified through agency master plans and other planning documents. Typically, improvements are identified in regional plans well in advance of the need for expansion, and environmental review follows with mitigation based on impacts of the expansion project. Some wastewater treatment facilities could face challenges expanding their discharge capacity because of pollutant load restrictions in receiving waters. In these instances, wastewater treatment capacity may need to be expanded along with the use of advanced treatment technology, reclaimed water distribution, or groundwater recharge. Where existing utility infrastructure cannot accommodate demand generated from increased land development, and where the capacity of existing utility infrastructure is exceeded, new or expanded infrastructure, including wastewater treatment, electric power, natural gas, and telecommunications may be required.

Environmental impacts could occur from both construction of these utility improvements and the conversion of undeveloped land to accommodate expanded facilities. For instance, construction activities for the projected regional growth pattern may increase the amount of wastewater generated and increase demand for local wastewater collection, storage, conveyance, and treatment facilities. As such, construction of new or expanded facilities could result in other environmental effects including air quality, stormwater runoff, and noise. The conversion of undeveloped land could result in the loss of agricultural land, increased stormwater runoff, loss of habitat, and damage to visual and cultural resources, among other impacts.

The regional growth pattern includes the land supply needed to accommodate the majority of the necessary increases in utilities and services, including water supply, conveyance, storage, and distribution systems; energy and power systems; telecommunication systems; or wastewater systems. This land supply is included in one of two ways: in cases where local plans identify specific locations and acreages for these services and utilities, they are included in the "public" development categories of the land use forecast; in cases where local plans did not identify specific locations and acreages, they are accounted for in the gross acreages of the "residential" development category of the land use forecast. In addition, most utilities are adjacent to or within the footprint of the development they are serving (e.g., pipelines constructed within roadways) and would, therefore, be within the regional growth pattern evaluated throughout this Draft EIR.

However, SACOG does not attribute un-sited public utilities to specific parcels, as timing and siting decisions related to public utilities are the purview of local government and public service districts. For larger regional facilities, such as those for wastewater treatment, the 2025 Blueprint does not identify specific sites for expansion of existing or new facilities and there is the potential for larger facilities to be located outside the regional growth footprint as they are often sited with a buffer from other development. Construction of facilities outside the regional growth footprint could result in physical effects on the environment that are not covered by this EIR. For these projects, project-level CEQA documents would be needed.

Transportation Network Improvements and Programs

Depending on the timing and location of these projects, it is possible that implementation of the 2025 Blueprint would increase demand for utility and service systems in such a way as to require the construction of additional facilities. For instance, operation of new transit facilities, bicycle and pedestrian facilities, and roadway facilities could result in increases in demand for electricity to power streetlights, traffic control devices, signage, and intelligent transportation systems (ITS) infrastructure. Similarly, ITS infrastructure often relies on communication systems to relay real-time information to travelers. New transportation infrastructure such as new transit hubs or stations could require toilets, sinks, and drinking fountains that would generate a small amount of additional wastewater. Most of the potential increased demand for utilities resulting from transportation network improvements would occur in areas that are already served by existing utilities; however, if demand exceeds the capacity of existing utility infrastructure, including wastewater treatment, electric power, natural gas, and telecommunications, new or expanded utility infrastructure would be needed. The construction of these facilities could result in environmental effects including degraded air quality, stormwater runoff, and noise. The conversion of undeveloped land for construction of new or improved utilities could result in the loss of agricultural land, increased stormwater runoff, loss of habitat, and damage to visual and cultural resources, among other impacts. As described above, most of these improvements are expected to occur within the portions of the plan area identified for growth, and the impacts associated with that development would be within the areas of forecast regional growth evaluated in this Draft EIR. However, construction of facilities outside the regional growth footprint could result in physical effects on the environment that are not covered by this Draft EIR. For these projects, project-level CEQA documents would be needed.

Summary

Although the areas identified for growth in the 2025 Blueprint would include most new or expanded utilities, construction of facilities outside the regional growth footprint could result in physical effects on the environment that are not covered by this Draft EIR. Because the locations and potential impacts associated with these facilities are uncertain, this impact would be **potentially significant**.

Mitigation Measures

SACOG does not have the authority to require the implementing agencies to adopt the identified mitigation measure; the mitigation measure is within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measure or other comparable measures identified by the lead agency at a project level would reduce the impacts related to the provision of utilities, and agencies with jurisdiction to adopt these measures should do so (PRC Section 21081).

Mitigation Measure 3.18-2: Require Provision of Adequate Utility Service

During project planning and environmental review, implementing agencies shall ensure provision of adequate utilities including water, wastewater, stormwater drainage, and electricity service. This shall be documented prior to project approval in the form of a capacity analysis approved by the applicable parks district.

Significance after Mitigation

Mitigation Measure 3.15-1 would require the provision of adequate public utilities but would not reduce the impact of constructing new facilities to a less-than-significant level. In addition, because the new facilities could be located outside of the growth geographies evaluated in this Draft EIR, implementation of Mitigation Measure 3.15-1 could result in additional effects on the environment. This may include the impacts of ground disturbance to air quality, hazardous materials, and cultural resources during construction as well as aesthetic and transportation impacts during operation. The physical effects of constructing new and expanded utilities would be evaluated in project-level CEQA documents, and SACOG cannot ensure that all impacts associated with these facilities can be mitigated to a less-than-significant level. Therefore, this impact would be **significant and unavoidable** for purposes of this program-level review.

Impact 3.18-3: Generate Solid Waste in Excess of State or Local Standards or in Excess of the Capacity of Local Infrastructure, or Otherwise Impair Attainment of Solid Waste Reduction Goals; or Fail to Comply with Federal, State, and Local Management Reduction Statutes and Regulations Related to Solid Waste

Regional Growth and Land Use Change

As shown in Table 3.18-11, the average tons of solid waste per capita for the plan area was 0.98 tons per person in 2019, which is the latest year that per capita data is available (CalRecycle 2019b). The growth forecast indicates that population in the plan area is expected to grow by approximately 580,000 people, an increase of about 23 percent. Assuming an average diversion (to recycling) rate of 50 percent, as required by the IWMA, the region's solid waste generation would increase by approximately 779 tons per day or 284,200 tons per year. In addition, the construction of new residential and non-residential uses under the regional growth pattern of the 2025 Blueprint would generate solid waste from activities such as demolition, grading, and excavation.

Landfill closure dates typically reflect the year a landfill is projected to reach capacity and take many factors into account, including rates of solid waste generation, rates of diversion, and projected growth. One major landfill, L&D Landfill Co, is estimated to close before 2040 (see Table 3.18-10); however, the other landfills in the plan area would remain open and have capacity beyond the 2050 planning horizon of the 2025 Blueprint.

There are a number state and local statutes and regulations related to solid waste as well as statutes and regulations for the siting, design, operation, or closure of landfills. The IWMA also ensures an effective and coordinated approach to the management of all solid waste generated within the state. The IWMA establishes a goal to reduce dependence on landfills as the primary means of solid waste disposal and introduces a hierarchy of preferred waste management practices that prioritize source reduction or waste prevention first; recycling, reuse, and composting second; waste transformation third; and finally, disposal by landfill.

The IWMA requires the preparation of a CIWMP, including a Countywide Siting Element that must demonstrate a remaining landfill disposal capacity of at least 15 years to serve all the jurisdictions in a county. The element includes a combination of strategies to demonstrate adequate capacity, including existing, proposed, and tentative landfills or expansions; increased diversion efforts; and the export of solid waste for disposal.

As required by the IWMA, the need for new landfills and the identification of possible new landfill sites related to implementation of the 2025 Blueprint would be identified through the CIWMP and Countywide Siting Element. New landfills would be required to comply with all federal, state, and local statutes and regulations related to solid waste prior to beginning construction and operation Development that occurs pursuant to the projected land use pattern of the 2025 Blueprint would be subject to all applicable state and local laws and regulations governing the generation, management, diversion, and reduction of solid waste.

Transportation Network Improvements and Programs

Waste generated from demolition, grading, and construction of transportation network improvements would be disposed of at facilities that accept construction, demolition, and inert materials, as required by local ordinances and the IWMA. Regulations related to the disposal of construction-related hazardous waste is discussed in Chapter 3.8, "Hazards and Hazardous Materials." Once constructed, transportation facilities would not generate substantial volumes of solid waste, although disposal bins may be provided in conjunction with some facilities (e.g., transit stations and trails).

Summary

As described above, implementation of the 2025 Blueprint would be subject to all applicable state and local laws and regulations governing the generation, management, diversion, and reduction of solid waste. Therefore, the projected land use pattern and planned transportation improvements from implementation of the 2025 Blueprint are not expected to generate solid waste in excess of state and local standards or conflict with federal, state, and local regulations related to solid waste. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

3.19 WILDFIRE

This section evaluates the regulatory context and policies related to wildfire (including relevant fire prevention policies and regulations), existing wildfire conditions of the plan area, and evaluates potential impacts of the 2025 Blueprint on existing wildfire risk, emergency services, and evacuation due to increased wildfire risk in the plan area.

For a discussion of the 2025 Blueprint's impacts on emergency response, such as fire and police protection, see Section 3.14, "Public Services." For a discussion of the 2025 Blueprint's impacts on implementation of adopted emergency response or evacuation plans, including those within areas of identified wildfire hazard risk, see Section 3.8, "Hazards and Hazardous Materials."

In response to the notice of preparation, SACOG received one comment related to wildfire. During the February 26, 2025 scoping meeting, information was requested about the effects of a lack of affordable housing in urban centers pushing people out into the wildland-urban interface (WUI) zone. The 2025 Blueprint would not directly result in the construction of housing or affect the affordability of existing or future housing units. However, this section of the Draft EIR evaluates whether the 2025 Blueprint's Development Pattern would require the installation or maintenance of associated infrastructure that may exacerbate fire risk. Appendix A includes all comments received in response to the notice of preparation and a summary of the scoping meetings.

3.19.1 Regulatory Setting

INTERNATIONAL BUILDING CODE

The International Building Code specifies construction standards to be used in urban interface and wildland areas where there is an elevated threat of fire. The International Building Code is widely adopted and used as a basis for building codes, including the California Fire Code, which is part of the California Building Standards Code (Title 24). Many jurisdictions within the plan area have adopted one or both codes into their code of ordinances.

FEDERAL

National Fire Plan

The US Department of the Interior's (DOI's) National Fire Plan is intended to ensure an appropriate federal response to severe wildland fires, reduce fire impacts on rural communities, and ensure sufficient firefighting capacity in the future. The Rural Fire Assistance program is a federal grant program funded to enhance the fire protection capabilities of rural fire districts and safe and effective fire suppression in the WUI. The program promotes close coordination among local, state, tribal, and federal firefighting resources by conducting training, equipment purchase, and prevention activities on a cost-shared basis.

Federal Land Assistance, Management, and Enhancement Act

In 2009, Congress passed the Federal Land Assistance, Management, and Enhancement (FLAME) Act as the basis for the US Department of Agriculture (USDA) and DOI to develop a national cohesive wildland fire management strategy. In response to the FLAME Act, USDA and DOI published the National Cohesive Wildland Fire Management Strategy, which includes the National Strategy and the National Action Plan, both of which were completed in April 2014. Together, these documents address elements requested by Congress after the passage of the FLAME Act and represent an approach to wildland fire management based on the goal of achieving safer, more efficient, cost-effective public and resource protection goals and more resilient landscapes.

Healthy Forest Restoration Act

The Healthy Forest Restoration Act, enacted by the US Congress on January 7, 2003, established a protocol for the creation of a type of document that articulated a wildfire safety plan for communities at risk from wildland fires known as a Community Wildfire Protection Plan.

STATE

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values that provide social, economic, and environmental benefits to rural and urban citizens. CAL FIRE is dedicated to the fire protection and stewardship of over 31 million acres of the state's privately-owned wildlands and provides emergency services in 36 of the state's 58 counties via contracts with local governments. California Public Resources Code (PRC) Section 4291 gives CAL FIRE the authority to enforce 100 feet of defensible space around all buildings and structures on non-federal State Responsibility Area (SRA) lands, or non-federal forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material. PRC Sections 4790 through 4799.04 provide the regulatory authority for CAL FIRE to administer the California Forest Improvement Program. PRC Sections 4113 and 4125 give CAL FIRE the responsibility for preventing and extinguishing wildland fires in the SRA.

Board of Forestry and Fire Protection

The Board of Forestry and Fire Protection (Board) is a Governor-appointed body within CAL FIRE. It is responsible for developing the general forest policy of the state, determining the guidance policies of CAL FIRE, and representing the state's interest in federal forestland in California. Together, the Board and CAL FIRE work to carry out the California Legislature's mandate to protect and enhance the state's unique forest and wildland resources.

The Board is charged with developing policies to protect all wildland forest resources in California that are not under federal jurisdiction. These resources include major commercial and non-commercial stands of timber, areas reserved for parks and recreation, woodlands, brush-range watersheds, and all private and state lands that contribute to California's forest resource wealth. In addition, the Board is responsible for identifying Very High Fire Hazard Severity Zones (VHFHSZ) in the SRA and Local Responsibility Area (LRA). Local agencies are required to designate, by ordinance, VHFHSZ and to require landowners to reduce fire hazards adjacent to occupied buildings within these zones (Government Code Sections 51179 and 51182). The intent of identifying areas with very high fire hazards is to allow CAL FIRE and local agencies to develop and implement measures that would reduce the loss of life and property from uncontrolled wildfires (Government Code Section 51176).

PRC Sections 4114 and 4130 authorize the Board to establish a fire plan (the 2024 Strategic Fire Plan for California), which, among other things, determines the levels of statewide fire protection services for SRA lands.

2024 Strategic Fire Plan

The 2024 Strategic Fire Plan for California is the state's road map for reducing the risk of wildfire. The plan aims to reduce firefighting costs and property losses, increase firefighter safety, and contribute to ecosystem health. The goals of the plan include identification of core capabilities and strengthening operational capacity with objectives that include application of emerging technology; completion of a comprehensive assessment of fire protection capabilities, wildfire response standards, and values at risk to confirm the future placement of fire protection resources; and expanding natural resource management and fire prevention operations to meet the state's wildfire and forest resilience goals and changing policy and legal mandates (CAL FIRE 2024a).

California Government Code Section 66474.02

Section 66474.02 requires that counties make findings approving a tentative subdivision map or tentative parcel for areas located in the SRA or LRA VHFHSZ that the subdivision is consistent with PRC Section 4290 and 4291 or consistent with local ordinances certified by the State Board of Forestry and Fire Protection as meeting or exceeding the state regulations. This means that the county must find that the design and location of the area is consistent with

applicable regulations established by CAL FIRE, ensure that fire protection and suppression services are developed and available, and find that the points of ingress/egress meet roadway standards for fire protection services.

California Public Resources Code

CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors (PRC Sections 4201-4204; Government Code Sections 51175–51189). Factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. CAL FIRE has identified two types of wildland fire risk areas: (1) wildland areas that may contain substantial forest fire risks and hazards; and (2) very high fire hazard risk zones.

PRC Section 4291 gives CAL FIRE the authority to enforce 100 feet of defensible space around all buildings and structures on SRA lands. PRC Sections 4790 through 4799.04 provide the regulatory authority for CAL FIRE to administer the California Forest Improvement Program. PRC Sections 4113 and 4125 give CAL FIRE the responsibility to prevent and extinguish wildland fires in SRAs. The PRC also includes fire safety statutes that restrict the use of equipment that may produce a spark, flame, or fire; requires the use of spark arrestors on construction equipment with internal combustion engines; specifies requirements for the safe use of gasoline-powered tools in fire hazard areas; and specifies fire suppression equipment that must be provided for various types of work in fire-prone areas.

New development located in SRAs is subject to the following requirements:

- determination that new subdivisions are consistent with regulations adopted by the State Board of Forestry and Fire Protection pursuant to PRC Sections 4290 and 4291 or are consistent with local ordinances certified by the State Board of Forestry and Fire Protection as meeting or exceeding the state regulations (CCR, Title 14, Section 1266.01);
- defensible space of 100 feet around all buildings and structures (PRC Section 4291; CCR, Title 14, Section 1299.03);
- provision of adequate emergency access and egress (PRC Sections 4290 and 4291; CCR, Title 14, Sections 1273.01–1273.09);
- emergency water requirements (CCR, Title 14, Sections 1275.01–1275.04);
- building siting, setbacks, and fuel modification (PRC Sections 4290 and 4291; CCR, Title 14, Sections 1276.01-1276.03); and
- building signing and number requirements (PRC Sections 4290 and 4291; CCR, Title 14, Sections 1274.01-1274.04)

In addition, PRC Section 4427 includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment with internal combustion engines; specify the requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire-prone areas.

California Fire Code

The 2022 California Fire Code (CFC) (CCR, Title 24, Part 9) establishes the minimum requirements consistent with nationally recognized good practices to safeguard public health, safety, and general welfare for the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of this code apply to construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of buildings or structures or any appurtenances connected or attached to such building structures throughout California.

CFC Chapter 49 provides minimum standards to increase building resistance to the intrusion of flame or burning embers projected by a vegetation fire and identifies performance and prescriptive requirements. Section 4906 provides hazardous vegetation fuel management requirements for buildings and structures located on land in a VHFHSZ in LRAs and land in a Moderate Fire Hazard Severity Zone, High Fire Hazard Severity Zone, or VHFHSZ in SRAs.

California Building Code

CCR, Title 24, Part 2, Section 701A.3 ("New Buildings Located in Any Fire Hazard Severity Zone") requires that new buildings located in any Fire Hazard Severity Zone within SRAs, any local agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted, shall comply with all the requirements of Chapter 7A.

The following specific alternative material and construction methods, exceeding the minimum criteria described in California Building Code (CBC) Chapter 7A, shall be implemented to meet the "Practical Effect" principles described in CCR Title 14 Section 1276.01 when buildings are located within 30-feet of property lines to reduce the potential for building-to-building fire spread may include, but are not limited to, the following provisions:

- Block any spaces between roof decking and the Class A roof covering to prevent embers from catching and igniting the building.
- Eaves shall be enclosed on the underside with non-combustible material, ignition-resistant material, or minimum 2-inch lumber.
- Exterior walls shall be constructed with non-combustible building materials such as stucco, fiber cement, stone, or brick, and comply with CCR Title 24, Part 2, Chapter 7A, Section 707A;
- Use WUI ember and flame-resistant vents, conforming with the requirements described in ASTM E2886, to protect exterior wall openings when the wall is located within 30-feet of another building or faces the Wildland Fuel Reduction Zone areas. Dryer vents shall be metal and equipped with a louver or flap.
- Exterior windows, skylights, glazed doors, and glazed openings within exterior doors shall be multi-paned with at least two tempered panes, minimum 20 minute fire rated, or fire-resistant glass block units. Shutters installed over windows shall be non-combustible.
- Areas under first floor bay windows shall be enclosed with non-combustible walls.
- Exterior doors of buildings shall be non-combustible, or have a non-combustible exterior storm door, and comply with CCR Title 24, Part 2, Chapter 7A, Section 708A.
- A minimum non-combustible area of 6 vertical inches, measured from the ground up (at grade) and from any attached horizontal surface like a deck, shall be provided on the exterior of all buildings. Non-combustible materials can include brick, stone, fiber-cement siding, or concrete.
- Fencing materials located within 5 feet of a building shall be constructed of non-combustible materials. Areas located between 0 feet and 5 feet from all buildings shall remain non-combustible. Back-to-back, combustible fencing shall be separated by a minimum of 5 feet.
- Landscape materials and other vegetation located 0 to 100 feet from dwellings shall comply with the fire-resistant standards of the local fire department and CAL FIRE.
- Accessory and miscellaneous structures, as defined in the CBC, located within the reduced fire setback zone shall comply with this plan and CCR Title 24, Part 2, Chapter 7A, Section 710A.
- Decks, including posts, joists, railing, stairs, and walking surfaces, shall be non-combustible and comply with CCR Title 24, Part 2, Chapter 7A, Section 709A.
- Projections shall be non-combustible, ignition resistant, or 1 hour fire-rated in accordance with International Wildland-Urban Interface Code, Section 503.2, and/or NFPA 1144, Section 5.2.
- Gutters and downspouts shall be made of non-combustible material. Gutters shall be provided with a non-combustible leaf guard.

California Public Utilities Commission

General Order (GO) 95 of the California Public Utilities Commission (CPUC) regulates all aspects of design, construction, and operation and maintenance of overhead electrical power lines and fire safety hazards for utilities subject to its jurisdiction. GO 165 imposes inspection requirements for transmission and distribution lines and GO 166 requires emergency response procedures to respond to electric system failures, major outages, or hazards posed by damage to electric utility facilities. CPUC Rule No. 11 enables electric utilities to suspend customer service when minimum vegetation clearance requirements are not met. On February 5, 2014, the CPUC adopted its Decision Adopting Regulations to Reduce the Fire Hazards Associated with Overhead Electric Utility Facilities and Aerial Communications Facilities (Decision 14-02-015). In addition to updating various GO 95 requirements and ordering further study, the decision called for creation by the CPUC of a High Fire-Threat District (HFTD) map identifying zones of high hazard, elevated risk and extreme risk for destructive utility-associated wildfires. On December 21, 2017, the CPUC issued its Decision Adopting Regulations to Enhance Fire Safety in the High Fire Threat District, adding statewide HFTD map requirements to GO 95 and enhancing GO 95's fire safety regulations within HFTD areas (Decision 17-12-024).

LOCAL

General Plans

Local planning policies related to wildfire and wildfire risk are established in each jurisdiction's general plan. In general, jurisdictions have policies in place related to identifying locations prone to experiencing wildfire and identification of those areas as specific fire hazard severity zones; fire code requirements for physical development; fire flow requirements for fire hydrants and locations; specifications for fire access roads; and identification of conservation and wildland areas. The following elements are the most relevant to wildfire:

- Conservation. Applies to conservation, development, and use of natural resources (e.g., soils, woodlands and forests, and wildlife habitat) and may also cover regulation of land uses in WUI areas (e.g., buffer areas) to control the transition between unoccupied land and human development.
- Open Space. Sometimes combined with the Conservation Element, the Open Space Element applies to the preservation of natural resources, including natural woodlands and forestlands and wildlife habitat.
- Safety. Applies to the potential risk of death, injuries, property damage, and economic and social dislocation resulting from floods, earthquakes, wildfire, and other hazards such as from hazardous materials release. Other locally relevant safety issues, such as emergency response, may also be included.

Mutual Aid Agreements

The state maintains a mutual aid system that is designed and operated to ensure that emergency resources are available and provided to jurisdictions if and when their own fire protection resources are not available or insufficient to provide adequate emergency services. While individual jurisdictions maintain control of their personnel and equipment, state government is obligated to provide resources to assist local jurisdictions if and when the need arises. The state is divided into six Operational Emergency Services Mutual Aid Regions. Sutter and Yuba counties are located within Region 3; and El Dorado, Placer, Sacramento, and Yolo counties are located in Region 4. Fire and rescue law enforcement coordinators also function at the county level, multi-county level, and state level to facilitate mutual aid.

Fire District Master Plans

Many jurisdictions and fire districts in the region have adopted or are planning to adopt Fire District Master Plans. A master plan addresses staffing needs, facility needs, and service goals for the service area and serves as a guiding document for the organization and daily functions of the department.

3.19.2 Environmental Setting

WILDFIRE

A wildfire is a nonstructural fire that occurs in vegetative fuels, excluding prescribed (planned) fires. Various factors contribute to the intensity and spread of wildfires: low moisture in the air, wind speed and direction, hot weather, drought conditions, vegetation type, the accumulation in the amount of vegetation (i.e., fuel), and topography. While wildfires are a natural component of California's fire-adapted ecosystems, they represent a hazard where development is adjacent to open space or within close proximity to wildland fuels or designated fire severity zones. Wildfires can occur in undeveloped areas and spread to urban areas where the landscape and structures are not designed or maintained to be ignition-resistant. The impacts of wildfire on a community are far-reaching and can include loss of life, loss of property, and environmental damage.

Wildfires can also generate indirect effects. For example, the smoke generated by wildfires could expose people to harmful pollution concentrations (see Section 3.3, "Air Quality," for additional discussion of pollutant emissions). Wildfires can also result in denuded slopes that do not have vegetation to stabilize the soil and store water. Fire can also create a water-repellent layer of surface soil that inhibits infiltration. The result is an increased risk of downslope or downstream flooding or landslide. As described further below, the plan area includes VHFHSZs in the Sierra Nevada and Coastal mountain ranges, as well as their foothills, which are particularly susceptible to these hazards.

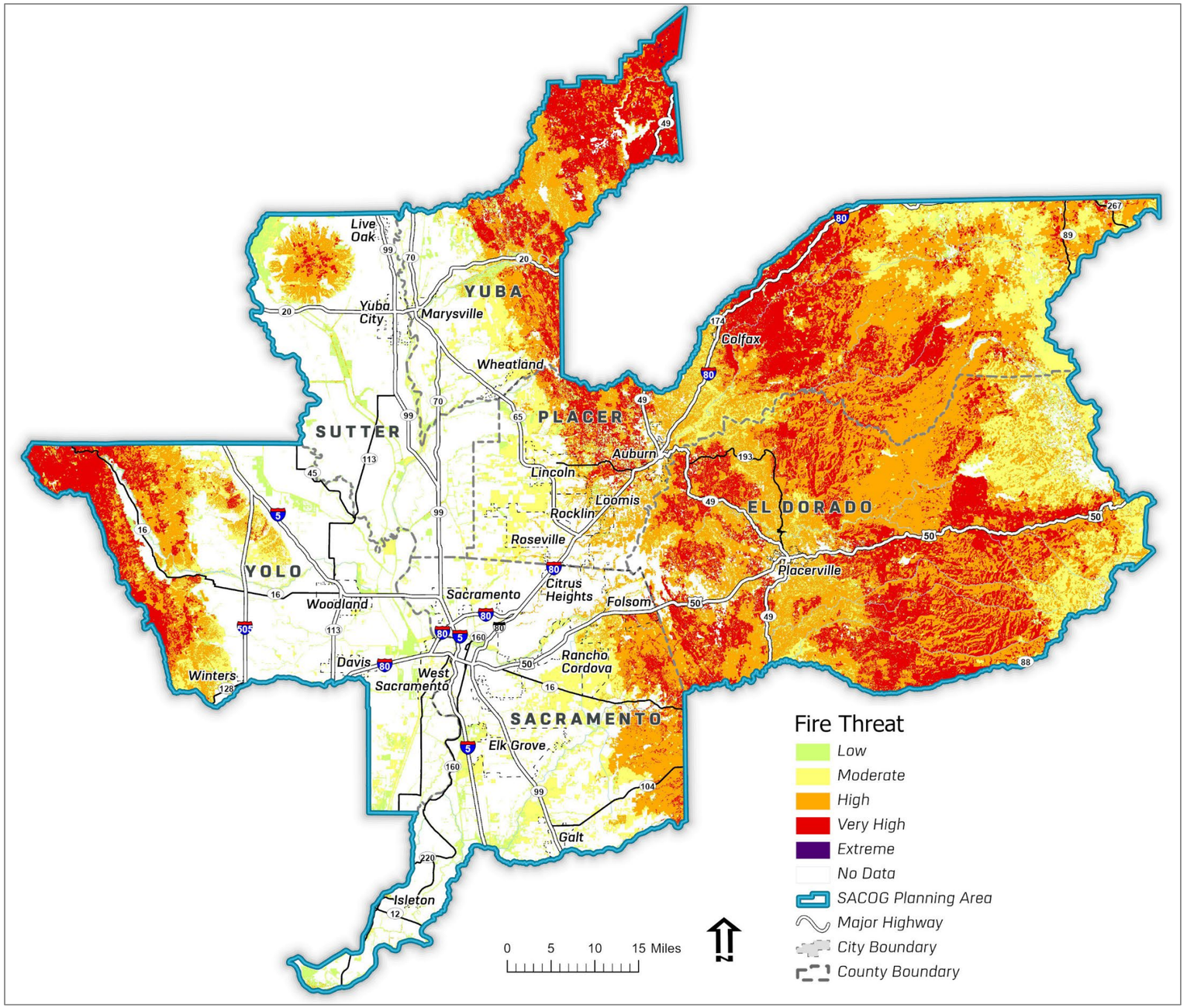
Wildfire behavior is a product of several variables, primarily weather, vegetation, topography, and human influences, which intermix to produce local and regional fire regimes that affect how, when, and where fires burn. The fire regime in any area is defined by several factors, including fire frequency, intensity, severity, and area burned. Fire frequency refers to the number of fires that occur in a given area over a given period of time; fire intensity refers to the speed at which fire travels and the heat that it produces; fire severity involves the extent to which ecosystems and existing conditions are affected or changed by a fire; and area burned is the size of the area burned by wildfire.

Wildfire risk reduction, prevention, and suppression is shared among federal, state, and local agencies. Federal Responsibility Areas are federally owned land, and the federal government has the responsibility of wildfire suppression for wildfires that begin on federal lands. States are generally responsible for wildfires that begin within SRAs, which are non-federal lands in unincorporated areas. Local regions are generally responsible for wildfires that begin within LRAs, which are incorporated areas (such as cities) and unincorporated areas designated as LRA.

WILDFIRES IN THE PLAN AREA

CAL FIRE prepares maps of fire threat, which use fuel conditions and fire potential in the ecosystem to determine the relative likelihood of a damaging or difficult to control wildfire occurring for a given area. Fire threat is a combination of two factors: (1) fire probability, or the likelihood of a given area burning, and (2) potential fire behavior (hazard). These two factors are combined to create five threat classes ranging from low to extreme. Fire threat is not a risk assessment by itself, but can be used to assess the potential for impacts on various assets and values susceptible to fire. Impacts are more likely to occur and/or be of increased severity for the higher threat classes.

As shown in Figure 3.19-1, much of the existing fire threat to the plan area is located within the north and eastern/southeastern half of Yuba County, the north and eastern sections of Placer County, El Dorado County, the eastern half of Sacramento County, the northern and western portion of Yolo County, and a pocket cluster near the northwestern region of Sutter County. These fire threat areas are located on land adjacent to and within the Sierra Nevada mountain range, which borders the plan area to the east, and within the western portion of the plan area in Yolo County, which marks the eastern edge of the coastal mountain ranges. Due to this mountainous topography, these fire threat areas are characterized by more undeveloped land consisting of natural vegetation, wooded areas, agricultural land, and generally lower-density development more susceptible to wildfires.



Source: Provided by SACOG in 2025.

Figure 3.19-1 Fire Threat in the Plan Area

Wildfires can occur in places where rural areas are located adjacent to forested, undeveloped areas. These places are referred to as the WUI, and are susceptible to wildfires as a result of dense vegetation in close proximity to human development. There are three types of WUI environments. The first is the true urban interface where development abruptly meets wildland. The second WUI environment is referred to as the wildland urban intermix, which includes communities that are rural and low density where homes are intermixed in wildland areas. Wildland urban intermix communities are difficult to defend because they are sprawling communities over a large geographical area with wild fuels throughout. The third WUI environment is referred to as the wildland urban influence zone, which includes wildland vegetation areas located within 1.5 miles of the nearest interface or intermix zone.

Figure 3.19-2 shows the existing WUI areas in the plan area. The 2014 King Fire in El Dorado County and the 2018 Camp Fire in Butte County were examples of WUI fires (SACOG 2019). These WUI areas are required to comply with specific building, setback, and vegetation management requirements in the CBC to reduce the potential for property damage and loss of life. As shown in Figure 3.19-2, WUI areas are located within northern Yuba County, western and central Placer County, western El Dorado County, interspersed areas (though mostly southern) of Sacramento County, and smaller areas in Yolo and Sutter Counties.

As described above, PRC Sections 4201-4204 directs CAL FIRE to map fire hazard within SRA based on fuel loading, slope, fire weather, and other relevant factors present (including areas where winds have been identified as a major cause of wildfire spread). These fire hazard severity zones classify a wildland zone as Moderate, High, or Very High fire hazard based on the average hazard across the area included in the zone. Fires have the potential to be most severe in the eastern and far western portions of the plan area, which are more rural and undeveloped. The fire hazard severity zones are shown in Figure 3.19-3.

Figure 3.19-1 depicts the locations of wildfire areas in the plan area that burned 10 acres or larger for the past 115 years (1908-2023). As shown in Figure 3.19-4, wildfire areas are located in the northern and eastern portions of Yuba County; interspersed throughout Placer County; the central, eastern half, and western portion of El Dorado County; the eastern half of Sacramento County; the western and northern half of Yolo County; and sparingly in the northwestern portion of Sutter County. Table 3.19-4 shows the number and acreage of fires by location within the plan area between 2016 and 2023. During this time, Placer, Yuba, and El Dorado counties experienced fires most frequently, and El Dorado and Yolo counties experienced the most acres burned by wildfires. In 2018, the CNRA found that approximately 85 percent of all fire ignitions in California were the result of human (anthropogenic) activities and the rest were caused by lightning strikes.

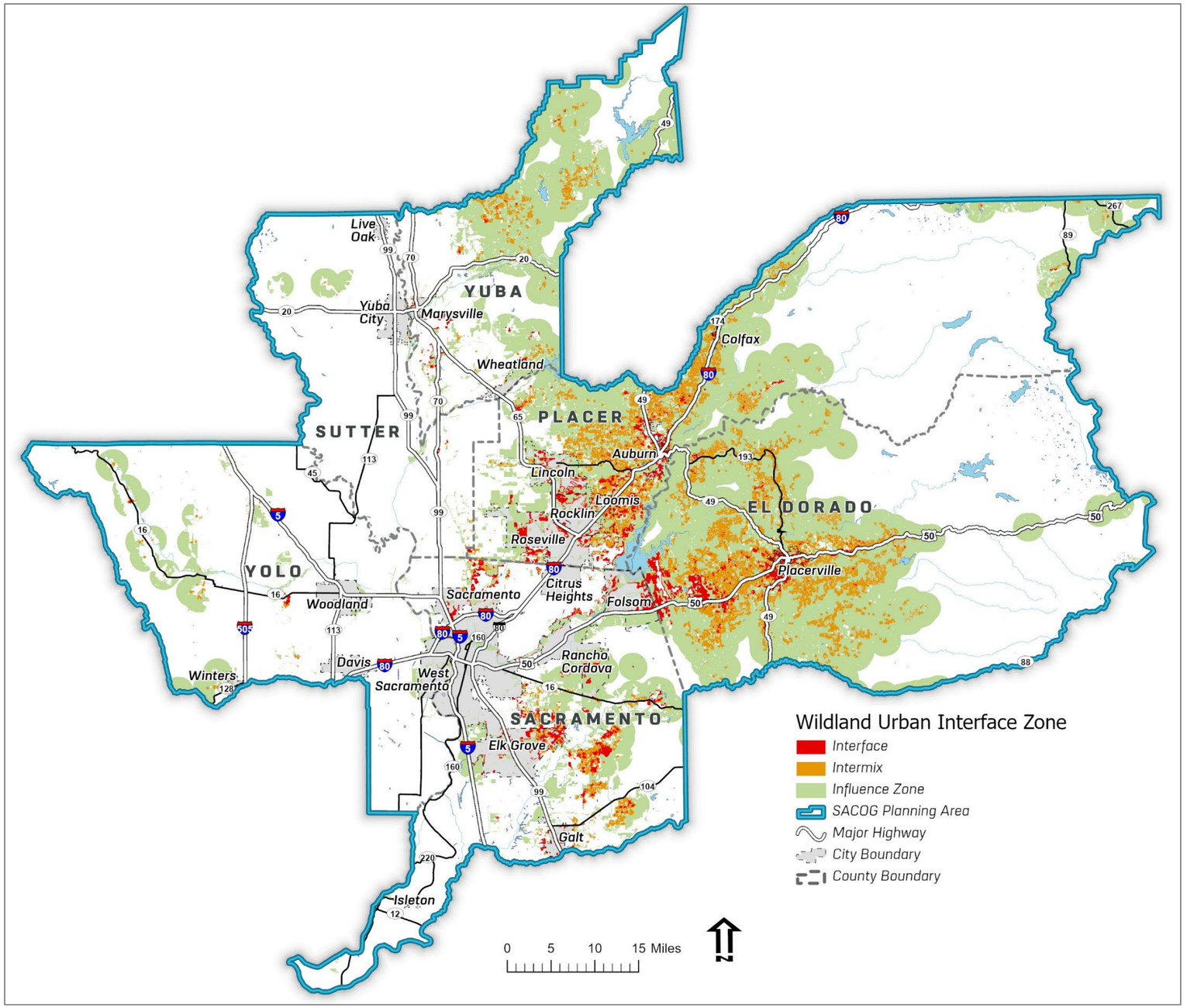
Table 3.19-1 Wildfire Incidents in the Plan Area, 2016-2023

County	Total Fires	Acres Burned
El Dorado	39	245,959
Placer	52	69,398
Sacramento	18	8,197
Sutter	6	2,476
Yolo	16	144,028
Yuba	51	18,747

Notes: These are fires over 10 acres in size.

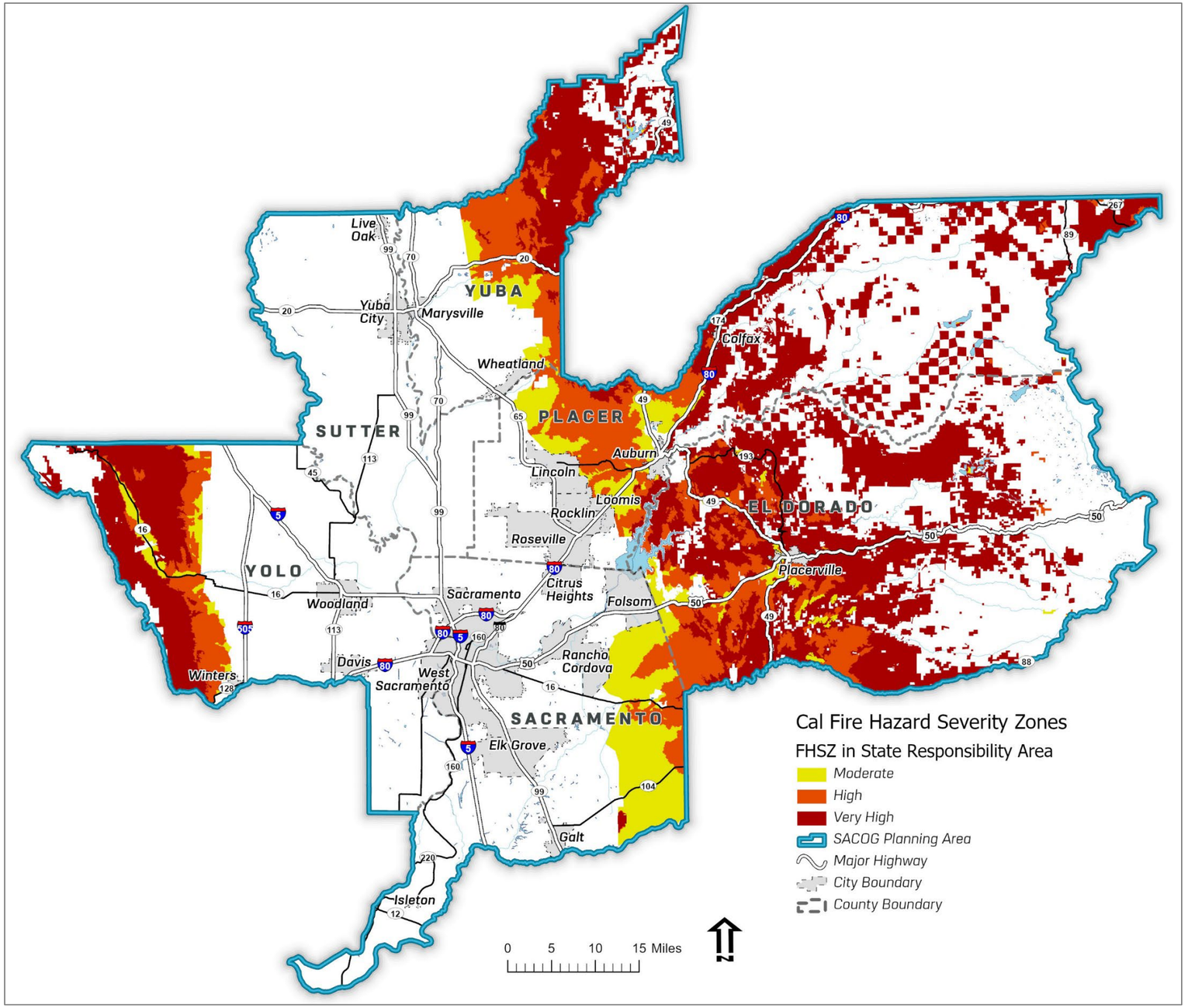
Sources: CAL FIRE 2024b, 2025.

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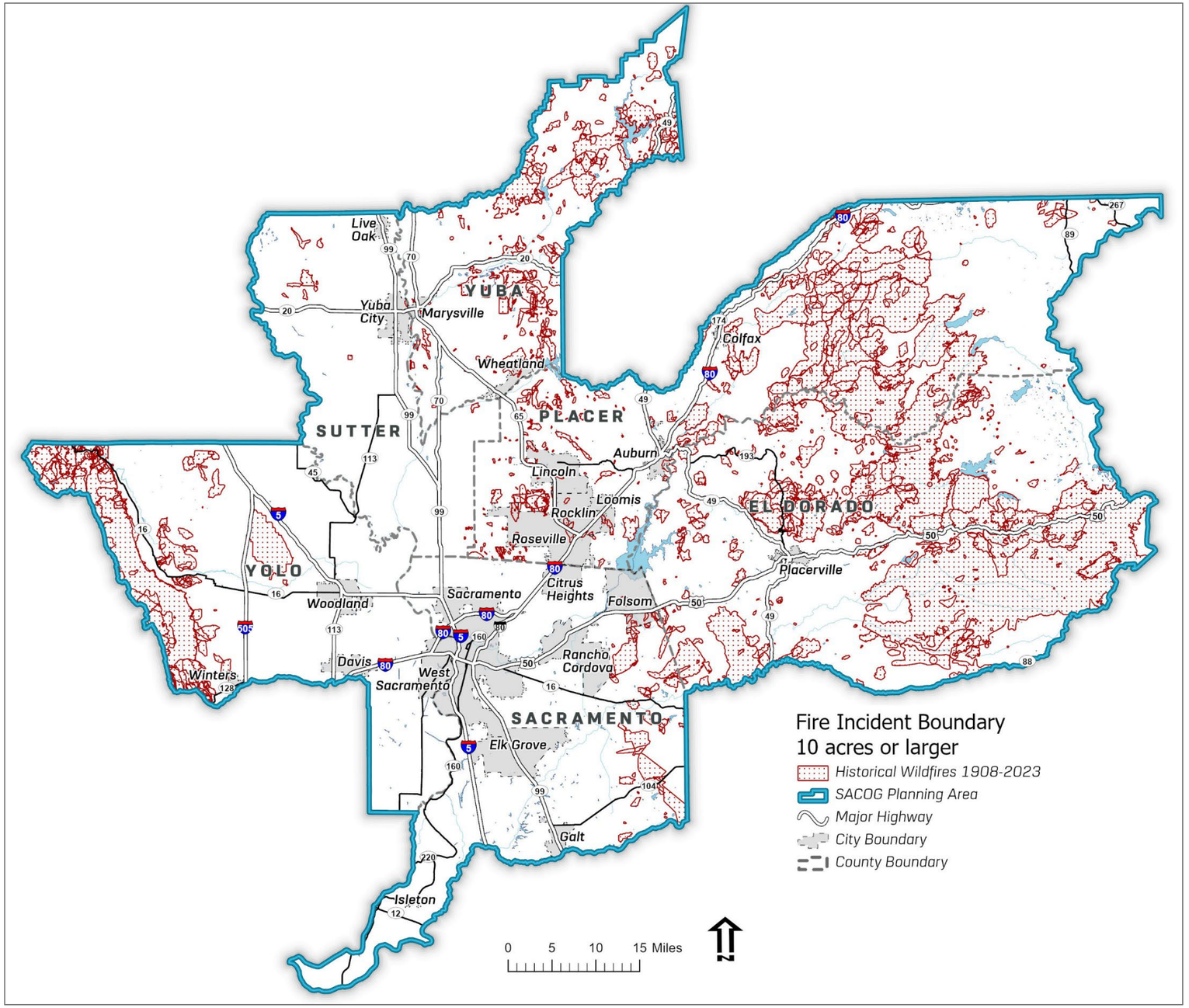
Source: Provided by SACOG in 2025.

Figure 3.19-2 Wildland Urban Interface Zones in the Plan Area



Source: Provided by SACOG in 2025.

Figure 3.19-3 Fire Hazard Severity Zones in the Plan Area



Source: Provided by SACOG in 2025.

Figure 3.19-4 Historical Fire Incidents between 1908 and 2023

3.19.3 Impact Analysis and Mitigation Measures

METHODOLOGY

Evaluation of potential wildfire impacts is based on a review of regulatory compliance standards and requirements, and existing documents that address wildfire potential in the plan area. The analysis examines how implementation of the 2025 Blueprint, including components of the proposed land use pattern and planned transportation improvements, may affect existing wildfire risk. This includes comparing the existing physical conditions in the plan area to the physical conditions that will result from buildout of the 2025 Blueprint. Existing wildfire conditions are, specifically, characterized by:

- CAL FIRE maps: updated as of 2024 (SRA maps) and are currently undergoing updates (LRA maps).
- The CAL FIRE 2024 Strategic Plan, which was most recently updated in 2024.
- The California Building Standards Code (CCR Title 24 [including Part 2, CBC, and Part 9, CFC, both of which were most recently updated in the 2022 triennial edition of Title 24]).

The proposed land uses are overlain on CAL FIRE maps to determine areas of higher risk of wildfire; transportation improvement programs that include physical development (such as road widenings and new roads) were also analyzed by calculating a 100-foot buffer area around the center line of the proposed road improvement. In determining the level of significance, the analysis assumes that the 2025 Blueprint would comply with relevant federal, state, and local laws, ordinances, and regulations adopted and implemented to avoid or substantially lessen adverse changes in existing wildfire potential and risk in the plan area.

In response to 2019 revisions to the State CEQA Guidelines (PRC Section 15126.2) and the 2015 California Supreme Court case, *California Building Industry Association* v. *Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, the following discussion is focused on the environmental effects that could result from future development that could exacerbate the current risk of wildfire. Although lead agencies retain the authority to include a review of potential impacts of the environment on a project, such review would occur separately from CEQA and is not provided herein.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the project would have a significant adverse effect related to wildfire if it would:

- expose, or exacerbate existing significant exposure of, people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires;
- due to slope, prevailing winds, and other factors in or near SRA or VHFHSZs, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) in or near SRA or VHFHSZs that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or
- expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes in or near SRA or VHFHSZs.

ISSUES NOT EVALUATED FURTHER

All environmental impacts are discussed below.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.19-1: Expose, or Exacerbate Existing Significant Exposure of, People or Structures to: Significant Risk of Loss, Injury, or Death Involving Wildland Fires; Pollutant Concentrations from a Wildfire; or Significant Risk of Downslope or Downstream Flooding or Landslides as a Result of Post-fire Slope Instability

Regional Growth and Land Use Change

Regional development would increase density and population, and it would include a variety of land uses, ranging from residential to commercial or industrial, that could exacerbate existing wildfire risk. Figure 3.19-5 shows the VHFHSZs within LRA, SRA, and federal responsibility areas overlaid on the 2025 Blueprint Development Pattern. Most of the VHFHSZ is mapped in areas classified in the 2025 Blueprint as Lands Not Identified for Growth or as Rural Residential Communities (in particular within the northeastern portion of Yuba County, northeastern portion of Placer County, and in most of western El Dorado County).

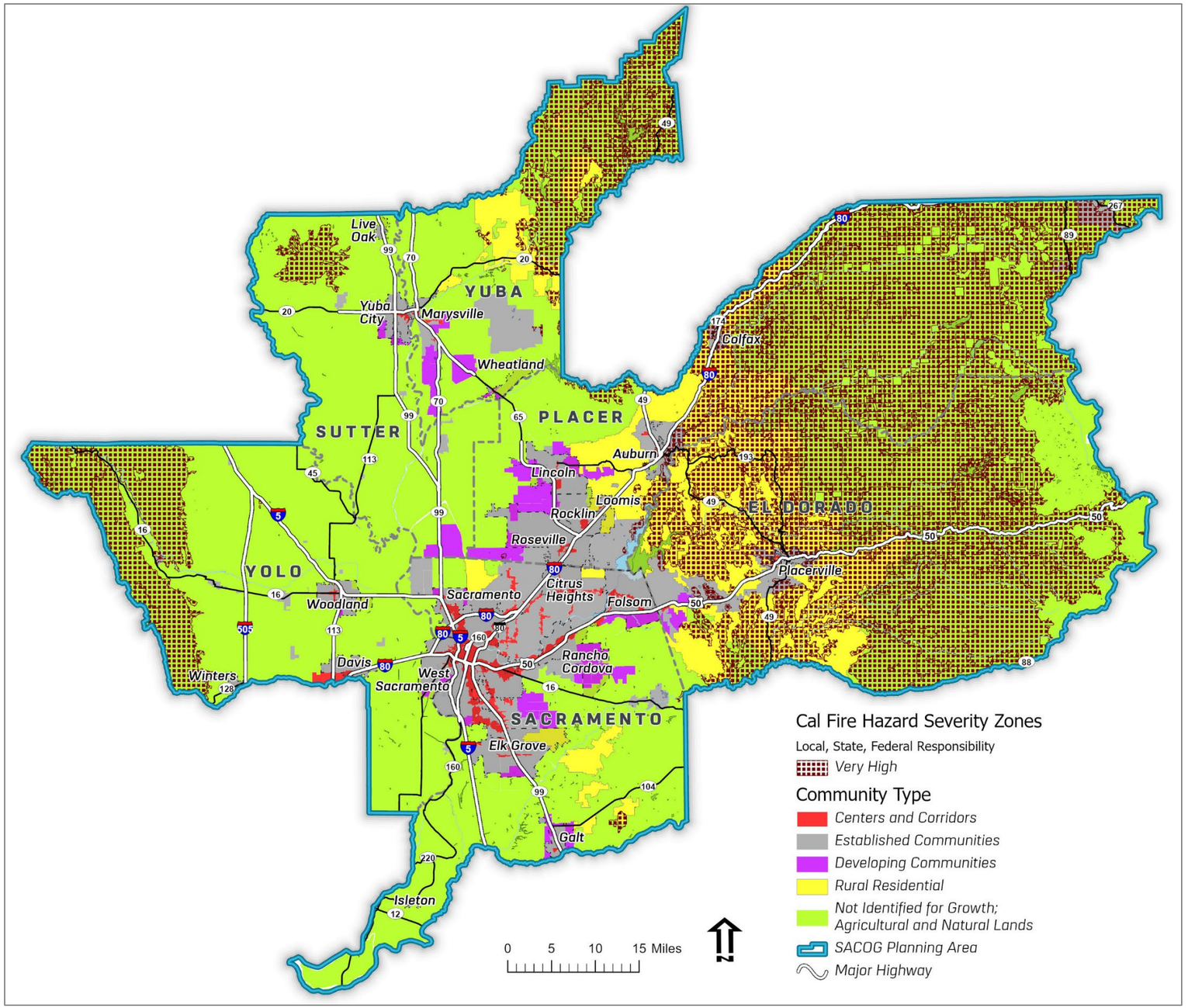
Table 3.19-2 outlines the acreage of the growth anticipated in the 2025 Blueprint within SRA VHFHSZ or LRA VHFHSZ. This table illustrates that the regional growth pattern could result in the development of approximately 592 acres of VHFHSZ, most of which is within SRA. Growth in Established Communities could result in the development of approximately 428 acres of VHFHSZ. Figure 3.19-5 shows VHFHSZ within Established Communities in Placer and El Dorado Counties. Developing Communities, which are the areas of new growth and development, would only affect 1 acre of VHFHSZ. However, Figure 3.19-5 also shows that Developing Communities in El Dorado County near US 50 would also be proximate to VHFHSZ.

Table 3.19-2 Regional Growth within SRA and LRA VHFHSZs

Area of Potential Impact	State Responsibly Areas with Very High Hazard Severity Zone (Acres)	Local Responsibly Areas with Very High Hazard Severity Zone (Acres)	Total (Acres)
Center and Corridor Communities			
Land Use Impact	0	41	**41**
Transportation Impact	1	17	**18**
Established Communities			
Land Use Impact	292	136	**428**
Transportation Impact	90	22	**102**
Developing Communities			
Land Use Impact	1	0	**1**
Transportation Impact	22	8	**30**
Rural Residential Communities			
Land Use Impact	589	3	**592**
Transportation Impact	34	—	**34**

Notes: Transportation Impact = area within 100-foot buffer around transportation projects within wildfire hazard zones. Only road widenings, new roads, new or expanded interchanges, new grade separated crossings (including Class I and pedestrian bridges), and new rail transit infrastructure were spatially analyzed, and the analysis potentially overestimates impacts because many planned transportation improvements, like road widenings, would not use the entire buffer area. Sources: CAL FIRE 2024b, 2025.

Regional growth and land use change that results in development close to and within VHFHSZs could increase potential wildfire ignition risk and could also affect wildfire behavior. This could expose existing people and structures to increased risk of loss, injury, or death involving wildland fires. This exacerbation of existing wildfire risk would also affect new structures and residents associated with the 2025 Blueprint. Human-caused wildfires tend to be generated by activities such as construction, debris and brush-clearing fires, electrical equipment malfunctions, campfire escapes, smoking, fire play (e.g., fireworks), vehicles, and arson. Due to the exacerbation of wildfire risk, the regional growth pattern could also expose plan area residents to pollutants, flooding, or landslides as a result of post-fire slope instability.



Source: Provided by SACOG in 2025.

Figure 3.19-5 2025 Blueprint Very High Fire Threat Based on Community Type

As part of the approval process for future discretionary developments, design of each individual land use project would be required to comply with applicable regulations (e.g., CBC, county codes, and municipal fire codes). As a result, new structures within areas of wildfire risk would be built to the most up-to-date engineering and design standards. These standards include the following: incorporate defensible space through controlled landscaping/setbacks to minimize accumulated vegetation and flammable material; provide sufficient ingress and egress of emergency service vehicles; and ensure the locations and adequate flow of fire hydrants. In addition, PRC Section 4427 includes fire safety regulation that restricts the use of equipment that may produce a spark, flame, or fire; requires the use of spark arrestors on construction equipment with internal combustion engines; specifies the requirements for the safe use of gasoline-powered tools in fire hazard areas; and specifies fire suppression equipment that must be provided onsite for various types of work in fire-prone areas. These types of regulations were adopted for the purpose of establishing minimum wildfire preparedness and protection standards.

Therefore, although specific project locations are not known, the 2025 Blueprint would increase the amount of development adjacent to wildfire-prone areas, VHFHSZs, and the WUI. Construction activities would be subject to the requirements of regional and local ordinances pertaining to grading and excavation and PRC Section 4427, which includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment with internal combustion engines; specify the requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire-prone areas (see Section 3.19.1, "Regulatory Setting"). Compliance with existing regulations, such as the California Fire Code, PRC, CBC, CPUC, and individual Fire District Master Plans would substantially reduce ongoing risks from wildland fires in VHFHSZs by requiring specific design features for new development and by requiring that adequate emergency response is in place to serve new development when wildfires occur.

Compliance with existing regulations and local policies, codes, and ordinances would reduce the risk of wildfire, ignition, and exposure of residents to uncontrolled wildfire spread and to harmful pollutant concentrations or slope instability that could result. However, it cannot be concluded that risk of loss, injury, or death would be adequately reduced in all locations for all future development within the plan area due to the large size of the plan area; the plan area's existing high risk for wildland fires; the level of uncertainty regarding the location, frequency, and severity of future wildfires; and the lack of precision regarding exact locations of future development within the plan area.

Transportation Network Improvements and Programs

The development of transportation network improvements and programs would include new lane miles of highways, arterials, and expressways. As shown in Table 3.19-2, transportation projects would be located within VHFHSZ. As described above for regional development, the transportation projects could both exacerbate the existing wildfire risk in these areas by increasing the potential for human-caused ignition and would have the potential to be affected by a wildfire.

Construction activities have the potential to increase existing wildfire risk through accidental ignition of wildfires during construction in forested areas, but this risk would be temporary in nature only for the duration of occurring during construction activities at Construction of transportation projects would be subject to the requirements of regional and local ordinances pertaining to grading and excavation; in wildfire-prone areas, this would likely require the controlled removal and clearing of vegetation, which may slightly reduce forested areas prone to wildfires as new roads and lanes are constructed.

Operational activities that may increase existing wildfire risk include sparks from the roadway and catalytic converters when people pull over (either after an accident or during an engine malfunction) and through the introduction of more people driving in and around the WUI and forested areas, as well as smoking on trails. Even with regulatory compliance, standard construction practices for transportation projects and operational activities would both result in substantially increasing existing wildfire risk or the likelihood of exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

Summary

Regional growth, land use change, and transportation network improvements and programs associated with the 2025 Blueprint would expose people and structures to an increased risk of loss, injury, or death involving wildland fires. Risks would be exacerbated in areas where people and structures would be concentrated within and adjacent to VHFSZs. Wildfires would also potentially expose the plan area's population to harmful pollutant concentrations in the form of wildfire smoke and increased potential for flooding or slope instability. Therefore, impacts related to wildfire would be **potentially significant**.

Mitigation Measures

SACOG does not have the authority to require the implementing agencies to adopt the identified mitigation measure; the mitigation measure is within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measure or other comparable measures identified by the lead agency at a project level would reduce the impacts related to wildfire risk, and agencies with jurisdiction to adopt these measures should do so (PRC Section 21081).

Mitigation Measure 3.19-1: Complete a Fire Safe Plan for Land Use Projects Located in Local Responsibility Area and State Responsibility Area Very High Fire Hazard Severity Zones

Individual project applicants shall work with the municipal or regional fire marshal and the CAL FIRE Battalion Chief to produce and implement a fire safe plan (FSP) for land use projects that are located within a VHFHSZ of an LRA or an SRA. Depending on the specific environmental conditions of each project site, the FSP shall include a number of strategies, including but not limited to:

- Externally or internally illuminating street signs and address numbers on residential buildings for clearer visibility;
- Fencing materials adjacent to non-irrigated open space areas shall be constructed of non-combustible materials;
- Combustible sheds and other outbuildings shall be kept at least 30 feet from residential units and other buildings on each parcel;
- Alternative materials and construction methods exceeding the minimum criteria described in CBC Chapter 7A shall be implemented for individual land use projects located within SRA and LRA VHFHSZs to meet the "Practical Effect" principles described in CCR Title 14 – Section 1276.01 (when buildings are located within 30-feet of property lines) and reduce the potential for building-to-building fire spread. Specific requirements may include[1]:
  - Block any spaces between roof decking and the Class A roof covering to prevent embers from catching and igniting the building.
  - Eaves shall be enclosed on the underside with non-combustible material, ignition-resistant material, or minimum 2-inch lumber.
  - Exterior walls shall be constructed with non-combustible building materials such as stucco, fiber cement, stone or brick, and comply with CCR Title 24, Part 2, Chapter 7A, Section 707A.
  - Use WUI ember and flame-resistant vents, conforming with the requirements described in ASTM E2886, to protect exterior wall openings when the wall is located within 30-feet of another building. Dryer vents shall be metal and equipped with a louver or flap.
  - Exterior windows, skylights, glazed doors, and glazed openings within exterior doors shall be multi-paned with at least two tempered panes, minimum 20 minute fire rated, or fire-resistant glass block units, and shutters installed over windows shall be non-combustible.
  - Areas located under first floor bay windows shall be enclosed with non-combustible walls.

[1] The project would comply with all applicable state and local code and regulatory requirements to achieve "Practical Effect" at the time of issuance of the building permit.

- Exterior doors of buildings shall be non-combustible, or have a non-combustible exterior storm door, and comply with CCR Title 24, Part 2, Chapter 7A, Section 708A.
- A minimum non-combustible area of 6 vertical inches, measured from the ground up (at grade) and from any attached horizontal surface like a deck, shall be provided on the exterior of all buildings. Non-combustible materials can include brick, stone, fiber-cement siding, or concrete.
- Fencing materials located within 5 feet of a building shall be constructed of non-combustible materials. Areas located between 0 feet and 5 feet from all buildings shall remain non-combustible. Back-to-back, combustible fencing shall be separated by a minimum of 5 feet.
- Landscape materials and other vegetation located within 0 to 100 feet of dwellings shall comply with the fire-resistant standards of CAL FIRE.
- Accessory and miscellaneous structures, as defined in the CBC, located within the reduced fire setback zone shall comply with this plan and CCR Title 24, Part 2, Chapter 7A, Section 710A.
- Decks, including posts, joists, railing, stairs, and walking surfaces, shall be non-combustible and comply with CCR Title 24, Part 2, Chapter 7A, Section 709A.
- Projections shall be non-combustible, ignition resistant, or 1 hour fire-rated in accordance with International WUI Code, Section 503.2, and/or National Fire Protection Association 1144 Standard for Reducing Structure Ignition Hazards, Section 5.2.
- Gutters and downspouts shall be non-combustible material. Gutters shall be provided with a non-combustible leaf guard.

- A Restrictive Covenant shall be filed with the final subdivision map which stipulates that a Fire Safe Plan has been prepared and wildfire mitigation measures shall be implemented.
- A 5-foot defensible space ember-resistant zone (Zone 0) shall be maintained around all buildings (including fencing within 5 feet).
- For residential units that include a Homeowners' Association (HOA), or other acceptable entity, the HOA or other acceptable entity shall be responsible for maintaining all private emergency vehicle access roads and wildfire fuel reduction zone provisions described in the FSP. Reliable on-going sources of funding shall be established and acceptable to the applicable fire department, fire district, or fire agency with jurisdiction prior to the recording of the final map for the project. Specifically, and also without limiting the foregoing, the owners shall be responsible for the operation and maintenance of, and for potential liability arising from:
  - provisions for the necessary repair and maintenance of the roadway surface (as determined by the HOA and/or applicable fire department, fire district, or fire agency with jurisdiction);
  - removal of vegetation overgrowing the roadway and infringing on the roadway clear vertical height of 15 feet or width of 20 feet;
  - provisions for the maintenance, repair, and/or replacement of NO PARKING - FIRE LANE signage or striping; and
  - provisions for the necessary repair and maintenance of vehicle and pedestrian access gates and opening systems.
- The FSP shall include a section on Fuel Reduction Management and Defensible Space Concepts to provide a fuel modification plan that consists of the following three defensible space zones for specific wildfire fuel reduction standards associated with buildings:
  - Zone 0 – Ember-resistant Zone (0 to 5-feet from buildings);
  - Zone 1 – Lean, Clean, and Green Zone (5 feet to 30 feet from buildings, or to the property line);
  - Zone 2 – Reduce Fuel Zone (30 feet to 100 feet from buildings, or to the property line).

Significance after Mitigation

Mitigation Measure 3.19-1 would require all land use projects proposed in SRA and LRA VHFHSZs to complete an FSP to address and minimize the potential effects resulting from wildland fire hazards. These design standards include using non-combustible materials; requiring appropriate distance between combustible buildings from residential development; utilizing construction materials that exceed minimum CBC fire standards; filing covenants with a final subdivision map to stipulate the FSP has been implemented; adhering to HOA requirements regarding repair, maintenance, and removal of vegetation; and incorporating defensible space. With the implementation of this mitigation measure, the pattern of wildfire progression may be limited to low-intensity underbrush and surface burning, which can create safe conditions for firefighters to successfully suppress fires (Kim et al. 2013; Martinson and Omi 2013; Tubbesing et al. 2019). Indirect impacts from wildfire hazards may also be reduced by project-level planning.

For the vast majority of development projects, compliance with existing local, state, and federal regulations would minimize potential adverse effects associated with wildfire hazards; however, due to the level of uncertainty regarding the specific project types and the lack of detailed development plans at this programmatic level of analysis, it cannot be concluded with certainty that all impacts would be minimized below the threshold of significance. Individual projects may involve land use types, locations, or design features that cannot be anticipated at this planning stage.

For projects proposing to streamline environmental review, lead agencies must conduct project-level analysis for each project to analyze whether, based on substantial evidence in the record, the proposed mitigation would reduce the impact to a less-than-significant level. Additional measures to minimize unique, project-specific impacts may be identified at the time of environmental review for these individual projects; however, the measures cannot be identified at this time, nor can SACOG guarantee that such measures will, in fact, be available and feasible for all project scenarios. Furthermore, SACOG cannot require the implementing agency to adopt Mitigation Measure 3.19-1, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. There are no additional plan-level measures available that would address this potential. Therefore, the impact would be **significant and unavoidable**.

Impact 3.19-2: Require the Installation or Maintenance of Associated Infrastructure in or near SRA or VHFHSZs that May Exacerbate Wildfire Risk or Result in Temporary or Ongoing Impacts to the Environment

Regional Growth and Land Use Change

The 2025 Blueprint would require the installation and maintenance of infrastructure to support regional growth. Physical impacts to the environment as a result of water supply and other utility improvements required to support the 2025 Blueprint (i.e., wastewater supply, natural gas, and telecommunications) are addressed in Section 3.17, "Utilities and Service Systems." As explained in Section 3.17, most of these new or expanded utilities would be located within the areas identified for growth in the 2025 Blueprint. However, because the locations and potential impacts associated with these facilities are uncertain, the construction of facilities outside the regional growth footprint could result in physical effects on the environment that are not covered by this Draft EIR.

Buildout of the 2025 Blueprint would focus a majority of development in urbanized areas with available infrastructure such as roads, emergency water supplies and fire hydrants, electrical power lines, and other utilities. Some regional growth in undeveloped areas would require the installation and maintenance of utility infrastructure, which is either located above- or belowground and typically along public rights-of-way. As it pertains to wildfire risk, the construction of utilities would temporarily increase the risk of fire (as discussed under Impact 3.19-1, above, for other construction activities in the plan area). Fire risks associated with construction activities would be addressed by the implementing agency through adherence to existing regulations and industry standard best management practices for fire prevention. The operation of some utilities (e.g. power infrastructure) may also introduce new wildfire ignition risks to the plan area. However, the extension of utilities would improve the plan area's capability to respond to and control potential wildfire incidents, thereby improving conditions regarding wildfire preparedness. In addition, where new infrastructure is required that involves overhead electrical power lines, projects would be subject to existing fire prevention regulations, including CPUC GO 95, which imposes inspection requirements for transmission and

distribution lines and requires certain procedures during electric system failures, major outages, or hazards posed by damage to electric utility facilities. Future development of utility infrastructure would also be subject to the requirements established in the PRC, including Section 4292, which requires clearing of flammable fuels for a minimum 10-foot radius from the outer circumference of poles and towers; and Section 4293, which sets basic requirements for clearances around electrical conductors. Furthermore, future projects would be required to meet vegetation clearance requirements outlined in CCR, Title 14, Section 1104.1(d) for single overhead facilities. Compliance with the CBC and applicable fire code requirements would minimize wildfire risks.

Transportation Network Improvements and Programs

Transportation projects would not generally require the installation of additional infrastructure with the potential to exacerbate wildfire risk. Construction and operation of transportation projects would be subject to the requirements of regional and local ordinances pertaining to grading and excavation, which would typically require the controlled removal and clearing of vegetation, which are described above in the Regional Growth and Land Use Change discussion. Implementation of the transportation projects in the 2025 Blueprint would not result in temporary or ongoing impacts to the environment beyond those that are evaluated throughout this EIR.

Summary

Although the areas identified for growth in the 2025 Blueprint would include most new or expanded facilities, construction of facilities outside the regional growth footprint could result in wildfire hazards that are not covered by this Draft EIR. As described above, fire risks associated with construction activities would be addressed by the implementing agency through adherence to existing regulations and industry standard best management practices for fire prevention. Further, compliance with the CBC and applicable fire code requirements would ensure that construction of each regional land use project would maximize safety against wildfire and reduce existing minimize wildfire risk. Once complete, the extension of utilities would improve the plan area's capability to respond to and control potential wildfire incidents, thereby improving conditions regarding wildfire preparedness. In addition, where new infrastructure is required that involves overhead electrical power lines, projects would be subject to existing fire prevention regulations including PRC Sections 4292 and 4293. Transportation projects would not generally require the installation of additional infrastructure with the potential to exacerbate wildfire risk. Through compliance with adopted regulations and the implementation of best management practices, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

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4 ALTERNATIVES

4.1 INTRODUCTION

The purpose of this chapter is to identify and describe alternatives to the 2025 update of the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS, referred to as the 2025 Blueprint). The primary intent of the alternatives analysis in an EIR, as stated in Section 15126.6(a) of the State CEQA Guidelines, is to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives." In determining what alternatives should be considered in the EIR, it is important to consider the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a) and are summarized below. Although EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency's decision-making body, here the SACOG board. (See PRC Sections 21081.5, 21081[a] [3].)

4.2 HISTORY OF THE 2025 BLUEPRINT

As explained in Chapter 2, "Project Description," the 2025 Blueprint is the latest iteration of SACOG's MTP/SCS planning document. The 2012 MTP/SCS was the first to proactively link land use, air quality, and transportation needs. In 2016, SACOG adopted its second MTP/SCS through a minor implementation-focused update that added a single year to the horizon and kept the Regional Growth Projection constant. The 2020 MTP/SCS increased the emphasis on sustainable growth strategies, focusing more on compact development forms with enhanced transit access that emphasized bus services over more expensive light rail. The 2020 MTP/SCS was also the first regional plan to introduce pricing strategies, such as tolling, as a way to raise funding for transportation. SACOG has improved the plan's effectiveness with each 4-year update.

SACOG began the planning process for the 2025 Blueprint in 2021. The planning process was divided into three major planning phases, each of which included robust public outreach and coordination or consultation with stakeholders and government bodies:

1) Policy Framework and Growth Projections. This phase was used to guide the analysis, discussion, and policy focus in the 2025 Blueprint.

2) Scenario Testing. Referred to as Pathways, this planning effort served as a learning tool for unpacking the many complex and intersecting issues facing the region over the next 20 years in housing and land use, transportation management, regional growth, environmental resources, economic development, systemic racial disparities, and climate change and resilience. The Pathways explored the tradeoffs inherent in divergent futures that would see the region focus on accommodating growth through outward expansion or focus on reinvestment and building out of existing communities before outward expansion. Three basic pathways were identified to explore the wide range of futures, focusing primarily on how land use pattern and transportation system investments/programs interact to contribute to or detract from the Triple Bottom Line goals endorsed by the SACOG board in the Policy Framework for the 2025 Blueprint.

3) Final Scenario and Policy Development. In 2024, the SACOG board adopted a set of land use and transportation assumptions designed to accommodate the region's anticipated growth by 2050. In the 2 years leading up to the board's adoption of final assumptions, SACOG engaged with local agencies from all 28 jurisdictions, California Department of Transportation (Caltrans), transit operators, developers, advocacy groups, the public, and other partners to analyze and test multiple options for how the region could grow. The SACOG board weighed in on these discussions during several committee and board meetings in 2023 and in the spring and summer of 2024. Ultimately, the board elected to adopt a scenario that aims to maximize benefits for the 2.5

million existing residents of the plan area, as well as future residents (whether they are newcomers to the region or young people raised here and looking to establish their own households).

Through this ongoing update and refinement process, SACOG has developed a plan that minimizes environmental effects, including greenhouse gas (GHG) emissions, while also reflecting local development and approvals, realistic projections of growth in population, and community input.

4.3 CONSIDERATIONS FOR SELECTION OF ALTERNATIVES

4.3.1 Attainment of Project Objectives

This chapter discussed and evaluated alternatives to a proposed project that could feasibly accomplish most of the basic objectives of the project (State CEQA Guidelines Section 15126.6[c]). As established in Chapter 2, "Project Description," of this Draft EIR, the primary purpose of the 2025 Blueprint is to meet federal and state requirements for regional transportation plans. Within this framework, the objectives of the plan are to:

- Create opportunities for residents to live and work in equitable, environmentally healthy, and economically vibrant communities.
- Provide a mix of housing types in walkable places that are affordable, that have access to economic opportunity, and that allow people to spend less time driving.
- Revitalize commercial corridors, rural main streets, and green zones.[1]
- Create complete communities by bringing housing to the jobs and jobs to the housing.
- Protect agricultural and natural lands.
- Identify policies and strategies that reduce per capita, passenger vehicle-generated GHG emissions by 19 percent to achieve the target set by CARB under SB 375.
- Implement innovative mobility projects, invest in high-capacity corridors and high-frequency bus service, prioritize lower cost transit solutions, and improve the responsiveness of the transportation system.
- Reduce per capita vehicle miles traveled (VMT).
- Build and maintain a safe, reliable, and multimodal transportation system.
- Find new and innovative ways to finance the costs of building and maintaining the transportation system in both the near- and long-term.
- Plan for natural disasters and extreme weather, including the need to evacuate or provide emergency services during natural disasters.

4.3.2 Environmental Impacts of the 2025 Blueprint

Potentially feasible alternatives were developed with the goal of avoiding or lessening the significant, and potentially significant, adverse impacts of the project, as identified in Chapter 3 (Sections 3.1 through 3.19) of this Draft EIR. As described throughout this EIR, many potential impacts could be feasibly reduced to a less-than-significant level with identified mitigation. However, because the mitigation measures are within the responsibility and jurisdiction of other public agencies and SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures, SACOG cannot guarantee that the measures would be implemented.

[1] Established by local jurisdictions as part of a SACOG program known as Green Means Go, Green Zones are areas that have capacity for infill growth, but face market or other barriers that have prevented development from occurring.

In order to focus this analysis on meaningful adjustments to the plan with potential to reduce physical environmental effects, the development of alternatives focused on impacts that are identified as significant and unavoidable following implementation of the mitigation measures identified in this Draft EIR (i.e., assuming that mitigation measures would be implemented, despite SACOG's lack of authority to impose mitigation):

- **Aesthetics**: Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and Its Surroundings in Non Urbanized Areas.
- **Agricultural and Forestry Resources**: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to Non-Agricultural Use; Conflict with Existing Zoning or General Plan Land Use Designations for Agricultural Use, or with a Williamson Act Contract; Conflict with Existing Zoning or Land Use Designation for, or Cause Rezoning of, Forest Land, Timberland, or Timberland Zoned Timberland Production; Result in the Loss of Forest Land or Conversion of Forest Land to Non-Forest Use; Involve Other Changes in the Existing Environment that could Result in Conversion of Farmland to Non-Agricultural.
- **Air Quality**: Be Inconsistent with Or Exceed Applicable Thresholds of Significance Established by The Local Air District For Long-Term Operational Criteria Air Pollutant Emissions and Short-Term Construction Criteria Air Pollutant Emissions; Expose Sensitive Receptors to Substantial TAC Concentrations, Including Those from Construction and Operational Emissions.
- **Cultural Resources**: Cause a Substantial Adverse Change in the Significance of a Historical Resource; Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources.
- **Greenhouse Gas Emissions and Energy**: Be inconsistent with the State's ability to achieve the 2030 reduction target of SB 32 and carbon neutrality by 2045, consistent with AB 1279; Increase GHG Emissions from Project Construction Activities Resulting from the 2025 Blueprint in a Manner Inconsistent with Achievement of the State's Climate Goals.
- **Noise:** Result in Temporary Noise Levels in the Vicinity of the Project that Exceed FTA Recommended Standards or Generate a Substantial Temporary Increase in Ambient Noise Levels.
- **Public Services:** Result in Substantial Adverse Physical Environmental Impacts Associated with the Provision of New or Physically Altered Governmental Facilities in order to Maintain Acceptable Service Ratios, Response Times or Other Performance Objectives for Fire Protection, Police Protection, Schools, Libraries, Social Services, and/or Other Public Services.
- **Recreation:** Increase the Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities such that Substantial Physical Deterioration of the Facility Could Occur or be Accelerated.
- **Transportation:** Result in a Change in per Capita VMT that is Inconsistent with CARB's 2022 Scoping Plan.
- **Tribal Cultural Resources**: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource.
- **Utilities and Service Systems**: Have Insufficient Water Supplies Available to Serve the Project and Reasonably Foreseeable Future Development During Normal, Dry and Multiple Dry Years; Require or Result in the Relocation or Construction of New or Expanded Water, Wastewater, Treatment or Storm Water Drainage, Electric Power, Natural Gas, or Telecommunications Facilities, the Construction or Relocation of Which Could Cause Significant Environmental Effects.
- **Wildfire:** Exacerbate Wildfire Risks, Thereby Exposing People or Structures to a Significant Risk of Loss, Injury, or Death, or Exposing Project Occupants to Pollutant Concentrations or People or Structures to Significant Risk of Downslope or Downstream Flooding or Landslides as a Result of Post-fire Slope Instability; Require the Installation or Maintenance of Associated Infrastructure in or near SRA or VHFHSZs that May Exacerbate Wildfire Risk or Result in Temporary or Ongoing Impacts to the Environment.

4.4 ALTERNATIVES CONSIDERED BUT NOT EVALUATED FURTHER

The factors that may be used to eliminate alternatives from detailed consideration in an EIR include failure to meet most of the basic project objectives; infeasibility; and inability to avoid significant environmental impacts (State CEQA Guidelines Section 15126.6[a][c]). "Feasible" is defined as "capable of being accomplished within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors" (State CEQA Guidelines Section 15364). The feasibility of an alternative may be determined based on a variety of factors, including but not limited to economic viability, availability of infrastructure, and other regulatory limitations (State CEQA Guidelines Section 15126.6[f][1]).

The following alternatives were considered by SACOG but are not evaluated further in this EIR.

4.4.1 No Road Expansion Alternative

To explore the connection between new lane miles and VMT, SACOG considered an alternative that would remove all new roads and road expansions from the transportation project list.

REASONS FOR REJECTION

Eliminating road expansion or extension projects may not result in a lower per-capita VMT than the 2025 Blueprint as analyzed in this Draft EIR. Roadway projects would be expected to increase VMT if they facilitate (1) new development in areas that encourage longer driving trips, (2) users switching from other modes (e.g., transit, walking, biking) to single occupancy vehicles, or (3) travel trips shifting from routes on local streets to longer, faster freeways. However, not all projects that add lane miles increase per capita VMT.

New and expanded roads are a relatively small portion of the projects in the 2025 Blueprint, and are proposed to address several conditions. The expansion of existing roadways can be intended to address bottlenecks that are contributing to congestion, and road extensions can provide more efficient connections to job centers that reduce commute distances. In these cases, roadway capacity projects may support shifting trips from longer routes and would not compete with trips by other modes (i.e., the route is not served by transit or could not be made walking/biking). Further, many vehicle trips are non-discretionary, in that a given household does not have the option to forego trips as a result of increased congestion or lower accessibility to important destinations (e.g., driving trips to work, school, grocery stores, and other essential services). Unless there are multimodal options available, these trips would continue to occur. In addition, the increased congestion under this alternative has the potential to increase traffic-related impacts to air quality, noise, and emergency response. The region does not have funding available to sufficiently serve all households in the region with transit or other alternatives to driving. Some roadway expansion is necessary to ensure the transportation system, including transit services, can provide reasonable access between homes and both work and non-work destinations.

Therefore, because many of the roadway expansions in the transportation project list of the 2025 Blueprint are designed to reduce the distances between destinations and increase accessibility for residents, removing these projects from the transportation list may not correlate to a reduction in VMT. Any reductions in per-capita VMT would likely be negligible, and the alternative would not substantially lessen the significant impacts of the project. Further, the congestion anticipated to occur without the roadway expansion projects would increase the severity of other environmental impacts. For these reasons, this alternative was not carried forward for detailed evaluation.

4.4.2 Infill Only Alternative

In this alternative, the projected land use pattern constrains the 20-year growth to Center and Corridor Communities and Established Communities. No growth in this scenario is assumed in Developing Communities or Rural Residential Communities. Planned transportation improvements would be concentrated on the existing system, with relatively

few new roads to serve new growth areas. New roads would be limited to providing connections from the existing system to development in Established Communities.

REASONS FOR REJECTION

By limiting growth to Center and Corridor Communities and Established Communities, this alternative would likely meet the GHG reduction objectives of the 2025 Blueprint. However, this alternative does not represent a reasonable land use forecast based on the latest available land use conditions and trends. Metropolitan Planning Organizations (MPOs) in air quality non-attainment areas must use the latest available estimates and assumptions for population, land use, travel, employment, congestion, and economic activity in the development of the MTP (23 CFR Section 450.322[e]). Not doing so would jeopardize the plan's conformity analysis by basing future emissions estimates on a land use pattern that is infeasible to implement. This alternative is not in alignment with locally planned growth and SACOG cannot supersede the exercise of land use authority by cities and counties within the region.

To inform the land use projection, SACOG analyzed policy, regulatory, and market factors including status of local, state, and federal entitlement applications; housing permit activity in the plan area; major infrastructure requirements; and developer readiness to pursue entitlement and construction. An all infill alternative would not acknowledge the current condition of Developing Communities with projects that are approved and those that have commenced construction. This alternative also would not acknowledge that the majority of Rural Residential Communities already allow a certain amount of development by right. Excluding growth from these communities would not represent a realistic or feasible alternative.

4.5 ALTERNATIVES SELECTED FOR DETAILED ANALYSIS

This section provides a comparative analysis of alternatives to the 2025 Blueprint, consistent with CEQA's requirements and case law guidance. These alternatives focus on strategies designed to substantially reduce or avoid environmental impacts, notably VMT and associated GHG emissions, while still feasibly meeting most of the basic project objectives. Consistent with State CEQA Guidelines Section 15126.6 and relevant CEQA case law (such as *Citizens of Goleta Valley v. Board of Supervisors [1990]* and *Habitat and Watershed Caretakers v. City of Santa Cruz [2013]*), these alternatives represent distinct, feasible approaches to achieving the project's core objectives while explicitly addressing and mitigating its environmental impacts.

The following alternatives are evaluated in this Draft EIR.

- Alternative 1: No Project Alternative assumes that the 2025 Blueprint is not adopted and the projected Development Pattern and planned transportation improvements set forth in the 2020 MTP/SCS continue to apply.
- Alternative 2: Infill Development Focused Alternative focuses the majority of growth in infill areas and adjusts the transportation projects to serve these communities.
- Alternative 3: Prioritized Investments in VMT Reduction Alternative would include an enhanced focus on transportation projects that are associated with VMT reduction.

A more detailed description of each of these alternatives is provided below, followed by a comparative analysis of how well the alternative would achieve the project objectives and the relative level of environmental impact associated with each alternative as compared to implementation of the 2025 Blueprint. For each resource area evaluated in this EIR, the text summarizes whether the impacts of the alternative would generally be more or less severe than those of the 2025 Blueprint.

4.5.1 Alternative 1: No Project Alternative

The No Project Alternative represents a scenario in which an updated MTP/SCS (i.e., the 2025 Blueprint) is not adopted and the 2020 MTP/SCS remains in effect. In the 2020 MTP/SCS, roughly 65 percent of new housing and 82 percent of new jobs are located in infill areas (Center and Corridor Communities and Established Communities). Table

4-1 provides the relative distribution of housing unit and job growth by Community Type for the 2025 Blueprint and Alternative 1.

This alternative would also maintain the transportation project list from the 2020 MTP/SCS. Project investment strategies from the adopted 2020 MTP/SCS would be carried forward. This alternative would focus on bus and rail projects and would increase transit service by increasing vehicle service hours. Like the 2025 Blueprint, this alternative would replace gas tax reliance with a mileage-based fee structure. The region's priced High Occupancy Toll Lane network would include reversible lanes and would require an aggressive timeline to deliver the network by 2035.

Table 4-1 Expected Employment and Housing Growth by Community Type for Alternative 1

Community Type	2020 Base Year: Jobs	2020 Base Year: Housing Units	2025 Blueprint 2020-2050 Growth: Jobs	2025 Blueprint 2020-2050 Growth: Housing Units	No Project: 2020-2050 Growth: Jobs	No Project: 2020-2050 Growth: Housing Units
Center and Corridor Communities	44%	13%	31%	33%	42%	38%
Established Communities	52%	76%	54%	31%	40%	27%
Developing Communities	2%	2%	15%	34%	17%	34%
Rural Residential Communities	2%	7%	1%	1%	0%	1%

Source: Based on the Blueprint Pathways Summary, SACOG 2024.

ATTAINMENT OF PROJECT OBJECTIVES

This alternative attains the project objectives, but less effectively and successfully than the 2025 Blueprint. The Development Pattern of the No Project Alternative builds on the 2004 Blueprint and provides roughly the same amount of infill as the project, with job and housing growth spread across the Center and Corridor, Established, and Developing communities. This alternative includes policies and programs to connect workers to jobs across the region and would promote growth in homes and jobs near high-frequency transit. The No Project Alternative demonstrated that it would also achieve the GHG reduction targets assigned to SACOG by CARB when the 2020 MTP/SCS was adopted.

This alternative identifies projects to support the development of a safe, reliable, and multimodal transportation system. However, because the transportation project list would not be updated to reflect current conditions, the funding priorities under this alternative may not align with current conditions or local objectives.

ENVIRONMENTAL IMPACTS

Aesthetics

Compared to the 2025 Blueprint, the No Project Alternative concentrates more growth into Center and Corridor Communities. A similar proportion of the growth would occur in Developing Communities, resulting in effects on the existing visual character and quality of public views in non-urbanized areas (i.e., Developing Communities and Rural Residential Communities). The potential to affect scenic vistas and other scenic resources would also be similar. Like the 2025 Blueprint, the No Project Alternative could result in vertical growth in urbanized areas and some new development and transportation facilities in less urbanized and rural areas that could adversely affect views of scenic vistas. Overall, a similar proportion of growth would occur in Center and Corridor and Established communities. Impacts to scenic quality in areas with substantial existing development would be same as with implementation of the 2025 Blueprint because existing zoning and other regulations governing scenic quality are mandatory and would apply equally under this alternative. Like the 2025 Blueprint, these impacts would likely be significant and unavoidable because SACOG cannot require the implementing agency to adopt mitigation, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. With implementation of the mitigation measures identified in this EIR, impacts would be less than significant. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Agricultural and Forestry Resources

Conversion of agricultural land (including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance), forest land, timberland, and timberland zoned Timberland Production to non-agricultural, non-forest, or non-timber uses under this alternative would be similar to the 2025 Blueprint because the projected land use pattern would result in a similar potential for land development in Developing Communities and Rural Residential Communities, which are the community types most likely to support agricultural and forested lands. Mitigation measures identified for the 2025 Blueprint would be applicable. These mitigation measures require the permanent protection of agricultural and forest land, as well as measures to minimize indirect conversion of farmland and manage growth at the rural-urban interface. However, as with implementation on the 2025 Blueprint, the impact would likely be significant and unavoidable. The impact of this alternative would be **slightly less** than the impact of the 2025 Blueprint.

Air Quality

Regional emissions of criteria air pollutants and ozone precursors are assumed to be similar under the No Project Alternative because the projected land use pattern would also focus growth within the same community types. However, this alternative would not include the updated transportation project priorities of the 2025 Blueprint and, as a result, household-generated VMT (and the associated emissions of criteria air pollutants and ozone precursors) could be higher under this alternative (which the mode share for transit, walking, and bicycling would be lower). As compared to the 2025 Blueprint, this increase in emissions of criteria air pollutants and ozone precursors would result in more adverse health outcomes from greater exposure to concentrations of criteria air pollutants in excess of the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). This alternative may not conflict with or obstruct implementation of applicable air quality plans, but it could result in relatively higher emissions of the criteria air pollutants and ozone precursors addressed by applicable air quality plans when compared to the 2025 Blueprint.

The number of sensitive receptors exposed to substantial concentrations of toxic air contaminants (TACs) would likely be slightly greater under this alternative as compared to the 2025 Blueprint. This is because TACs are contaminants associated with roadway emissions that dissipate quickly from their source. In addition to a potential to result in higher household-generated VMT, which could create more mobile sources of TACs (along freeways and major roadways), the overall number of sensitive receptors exposed to TAC emissions would likely to be higher under this alternative because more homes would be located in Center and Corridor Communities. Housing units in these communities are more likely than other community types to be located in close proximity to roadways and freeways that generate substantial concentrations of TAC emissions.

Mitigation measures identified for the 2025 Blueprint would be applicable and, if implemented, would reduce impacts to a less-than-significant level. Mitigation measures would require design measures that reduce criteria pollutant emissions, reduce emissions from typical construction, conduct site-specific health risk assessments, implement strategies in the CARB technical advisory related to pollutant exposure near roadways, and implement best practices related to odors. However, like the 2025 Blueprint, these impacts would likely be significant and unavoidable because SACOG cannot require the implementing agency to adopt mitigation, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. The impact of this alternative would be **slightly greater** than the impact of the 2025 Blueprint.

Biological Resources

Impacts (direct or through habitat modification) on candidate, sensitive, or special status species (including plants, wildlife, and fish) under this alterative would be similar to the 2025 Blueprint, because this alternative's projected land use pattern would be similar in terms of the proportion of growth in existing communities and undeveloped areas. The potential for impacts to riparian habitats, oak woodlands, other sensitive natural communities, state or federally protected wetlands, migratory wildlife corridors and native wildlife nursery sites, adopted habitat conservation plans (HCP) or natural communities conservation plans (NCCP), other approved habitat conservation plans, and local policies and ordinances protecting biological resources would be similar for the same reasons.

This impact would be similar to adoption and implementation of the 2025 Blueprint. Mitigation measures identified for the proposed 2025 Blueprint would be applicable. These measures require the completion of project-level

biological resource assessments; identification and minimization of impacts to special status species and habitats, waters, and movement corridors; and avoidance and minimization of effects on biological resources protected by local ordinances. Like the 2025 Blueprint, these impacts would likely be significant and unavoidable because SACOG cannot require the implementing agency to adopt mitigation, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. With implementation of the mitigation measures identified in this EIR, impacts would be less than significant. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Cultural Resources

Development that occurs to accommodate the Regional Growth Projection under Alternative 1 could cause a substantial adverse change in the significance of a historical resource, an adverse change in the significance of unique archaeological resources, or disturb human remains during grading. Impacts to cultural resources under this alterative would be similar to the 2025 Blueprint because this alternative's potential to result in growth in undeveloped areas is similar. Mitigation measures identified for the 2025 Blueprint would be applicable. These measures would require the completion of project-specific historic built environment and archaeological resource studies to identify project-level mitigation, and reduction in the visibility and accessibility of archaeological resources. However, as with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable because destruction or substantial alteration of the contributing physical characteristics or character of the physical setting of an archaeological resource could still occur. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Geology, Soils, and Paleontological Resources

The potential for the plan area to experience seismic activity and seismic-related ground failure, as well as the degree to which new development would be required by existing laws and regulations to address these risks, would not change under the No Project Alternative. Moreover, because the proportion of growth in undeveloped areas (i.e., Developing Communities and Rural Residential Communities) would be similar, the potential to generate substantial soil erosion or encounter potential soil hazards (e.g., soils susceptible to expansion, landslide, lateral spreading, subsidence, liquefaction, or collapse) would be similar, as would the potential to directly or indirectly destroy a unique paleontological resource or geologic feature.

Mitigation measures identified for the proposed 2025 Blueprint that would require site-specific paleontological resources inventory and construction monitoring would be applicable. Like the 2025 Blueprint, these impacts would likely be significant and unavoidable because SACOG cannot require the implementing agency to adopt mitigation, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. With implementation of the mitigation measures identified in this Draft EIR, impacts would be less than significant. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Greenhouse Gas Emissions and Energy

This focus on infill growth in this alternative would generally result in smaller, more efficient new growth and a development pattern that reduces VMT. However, because the No Project Alternative would not update the transportation project list to support this development pattern, there is potential for this alternative to generate slightly more VMT, and associated GHG emissions, than the 2025 Blueprint. As a result, there is a slightly greater potential for this alternative to conflict with state and local plans for the reduction of GHG emissions or result in the wasteful or unnecessary use of energy. Mitigation measures identified for the 2025 Blueprint would be applicable. These measures require coordination with local agencies to reduce GHG emissions form all sectors, and implementation of all feasible on- and off-site measures to reduce GHG emissions. SACOG's support of local climate change reduction programs would be consistent with guidance in the 2022 Scoping Plan, which indicates that local and regional GHG reduction efforts are necessary for the state to meet its long-term climate change goals. However, as with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable because there is no assurance that local jurisdictions would implement the necessary measures to reduce the plan area's fair share GHG inventory to levels consistent with statewide reduction targets. Additionally, SACOG cannot require local

implementing agencies to adopt GHG reduction plans or policies. The impact of this alternative would be **slightly greater** than the impact of the 2025 Blueprint.

Hazards and Hazardous Materials

Hazardous materials impacts to the public or the environment associated with construction activities and operations under this alternative would be the same as the impacts under the 2025 Blueprint. This is because of the numerous federal, state, and local requirements and regulations that minimize the creation of significant hazards to the public or the environment associated with routine transport, use, or disposal of hazardous materials; reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; and handling of hazardous materials, substances, and waste within 0.25 mile of an existing or proposed school. These existing requirements and regulations would apply equally to the projected land use patterns and planned transportation network improvements of both this alternative and the 2025 Blueprint. This alternative would also have a similar potential to result in airport-related hazards because the potential for development near airports would be similar to the 2025 Blueprint, and existing requirements and regulations would apply, including those addressing potential safety hazards and excessive noise within an airport land use plan or within 2 miles of a public or public use airport.

The mitigation measure identified for the proposed 2025 Blueprint would also be applicable to the No Project Alternative. This measure would require site-specific investigations to characterize the potential presence of hazardous waste. Like the 2025 Blueprint, these impacts would likely be significant and unavoidable because SACOG cannot require the implementing agency to adopt mitigation, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. With implementation of the mitigation measures identified in this EIR, impacts would be less than significant. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Hydrology and Water Quality

Impacts associated with hydrology and water quality under this alternative would be similar to the 2025 Blueprint because of the similarities in the land use pattern. Construction effects on water quality, the potential to introduce impervious surfaces that could impair groundwater recharge, potential to alter existing drainage patterns, and potential to develop within 100-year flood plains, would all be similar to the 2025 Blueprint. The projected land use pattern and planned transportation improvements of this alternative would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. Effects on hydrology and water quality would less than significant. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Land Use and Planning

New roadway or highway improvements can physically divide existing communities by providing physical barriers where none currently exist. Expansion of existing roadways and highways also can physically divide existing communities to the extent that wider facilities with additional lanes represent greater physical barriers than narrower facilities. The planned transportation improvements of this alternative would include additional lane miles along the roadway and highway network. The planned transportation improvements of this alternative would result in greater potential to physically divide existing communities.

Although it is assumed that this alternative may achieve the 19 percent reduction target established for SACOG by CARB, this alternative would not meet the core requirement of SB 375 to prepare an SCS that aligns with local land use planning. That is, this alternative does not reflect growth in Developing Communities that has been approved and begun construction. In this regard, it would not meet the SCS requirements. Like the 2025 Blueprint, this alternative would direct growth to areas within city boundaries in the Delta, and all subsequent projects that fall within the Land Use Resource Management Plan (LURMP) boundaries would be required to demonstrate consistency with the LURMP and satisfy mitigation requirements.

Overall, the impact of Alternative 1 would be greater than the project and would likely be significant and unavoidable due to the inconsistency with the known development pattern. The impact of this alternative would be **greater** than the impact of the 2025 Blueprint.

Mineral Resources

This alternative would result in a similar amount of growth in established communities, with greater focus on Center and Corridor Communities. As described for the 2025 Blueprint, the potential for loss of availability of a designated mineral resource of value to the region the state, or the loss of availability of a locally important mineral resource recovery site, related to Alternative 1 would likely be less than significant. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Noise and Vibration

This alternative would generate noise levels that are generally similar to those that would be generated under the 2025 Blueprint because the same total population, housing, and employment are assumed. The projected land use pattern of this alternative, while slightly more compact than the 2025 Blueprint due to additional focus on development in Center and Corridor Communities, would not result in land use types that would result in different levels of vibration or groundborne noise. Mitigation measures identified for the 2025 Blueprint would be applicable. These measures would require that implementing agencies employ measures to reduce noise associated with construction, traffic, and stationary noise from new development. Measures would also address construction vibration and operational vibration from new and expanded rail systems. However, with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Population, Employment, and Housing

The No Project Alternative would not result in the potential for regional impacts associated with displacement of substantial numbers of people or housing that results in construction of replacement housing elsewhere. Furthermore, the alternative would not result in the potential for substantial induced unplanned population growth in an area, either directly or indirectly. Regional growth would continue to be accommodated following the development pattern and policies of the adopted 2020 MTP/SCS. This impact would likely be less than significant. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Public Services

The population growth that is forecast to occur with the Regional Growth Projections would increase demand for public services including police protection, fire protection, emergency response, school, library, and social services. Increases in demand for public services would correlate with the location of development identified in the projected land use pattern of Alternative 1. This alternative is anticipated to result in effects on public services that are similar to those that would be generated under the 2025 Blueprint because the same total population, housing, and employment are assumed and the proportion of new development in exiting communities would be similar. As described for the 2025 Blueprint, because the population is forecasted to increase, it is possible there would be increased demand for public services that could impede the achievement of acceptable service levels. During project planning, design, and project-level environmental review, implementing agencies would ensure that adequate service levels for public services are achieved. This would be documented prior to project approval in the form of a capacity analysis, provider will-serve letter, or equivalent documentation. As with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable because SACOG cannot require the implementing agency to comply with service levels, and it is ultimately the responsibility of the implementing agency to determine service levels and adopt project-specific mitigation, as applicable. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint

Recreation

This alternative is anticipated to result in effects on parks and recreation that are similar to those that would be generated under the 2025 Blueprint, because the same total population, housing, and employment are assumed. Like the 2025 Blueprint, most (roughly 70 percent) of new growth would occur in areas that have established park facilities (i.e., Center and Corridor Communities and Established Communities). As a result, the total number of residents served by existing facilities may increase. Growth that occurs in Developing Communities would include park and recreation facilities within the development footprint analyzed for this alternative. As with implementation of the 2025

Blueprint, the impact would likely be significant and unavoidable because SACOG does not have the authority to ensure that all future development meets established park and recreation standards. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint

Transportation

As described above, the focus on infill growth under this alternative would generally result in smaller, more efficient new growth and a development pattern that reduces VMT. However, because the No Project Alternative would not update the transportation project list to support this development pattern, there is potential for this alternative to generate slightly more VMT than the 2025 Blueprint. Mitigation measures identified for the 2025 Blueprint that would implement VMT reduction strategies would be applicable. However, as with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable because SACOG cannot require the implementing agency to comply with service levels, and it is ultimately the responsibility of the implementing agency to determine service levels and adopt project-specific mitigation, as applicable. In addition, as described for the 2025 Blueprint, additional State policy actions and funding would be required to close the gap between VMT reductions that can be achieved at the regional level and the State's goals. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Tribal Cultural Resources

Impacts to tribal cultural resources under this alterative would be similar to the 2025 Blueprint because this alternative's Development Pattern is similar. The potential impacts on tribal cultural resources that could result from the substantial alteration or removal of a tribal cultural resource or indirect impacts from access-related damage would be similar. Mitigation measures identified for the 2025 Blueprint that would require worker awareness training, stopping ground disturbance in the event of an unanticipated discovery, and reducing the visibility of or access to a tribal cultural resource would be applicable. However, as with implementation of the 2025 Blueprint, because destruction of a tribal cultural resource could still occur, the impact would likely be significant and unavoidable. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Utilities and Service Systems

This alternative is anticipated to result in impacts to utilities and service systems (both construction-related and operational) that are similar to those that would be generated under the 2025 Blueprint because the same total population, housing, and employment numbers are assumed. Impacts related to the relocation or construction of new or expanded water, wastewater, water treatment, stormwater drainage, electrical power, natural gas, or telecommunications infrastructure would not result in unique physical environmental impacts not covered in the analysis of growth under this alternative. Effects could occur relative to the availability of water supplies and availability of wastewater treatment facilities to serve new growth. This alternative would have the same impact related to solid waste generation and conflicts with solid waste management and reduction statutes and regulations. Mitigation identified for the 2025 Blueprint requiring water conservation measures and coordination with local public service providers would be applicable. However, as with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable because the effectiveness of project-level mitigation cannot be known at this time. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Wildfire

This alternative would result in a similar share of new homes within Rural Residential Communities, which have a higher risk of wildfire than other Community Types and, when developed, are more likely to exacerbate post-fire flooding or landslide hazards that would require emergency responses or emergency evacuation. Due to the similarities of the Development Pattern, this alternative would result in similar wildfire hazards as the 2025 Blueprint. The mitigation measure identified for the 2025 Blueprint, which requires preparation of a fire safe plan for land use projects located in high fire hazard severity zones, would be applicable. However, as with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable**.** The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

4.5.2 Alternative 2: Infill Development Focused Alternative

This alternative assumes the same growth in population, jobs, and housing numbers as the 2025 Blueprint, but with more compact and mixed land uses. Under this alternative, the vast majority of growth would occur in infill areas with expansion only occurring in greenfield developing communities under construction as of January 2020. Compared to the 2025 Blueprint and Alternative 1, this alternative provides the most new, small-lot and attached housing and the most growth through infill and redevelopment. Growth in infill areas would consist of already approved projects, vacant lots, and redevelopment of underutilized commercial corridors oriented around the transportation investments included in the plan (see Table 4-2).

Transit projects would be focused on high quality and high frequency service in productive corridors rather than coverage. To address coverage, on-demand micro transit services, focused on transfers to the high-frequency network at multimodal mobility hubs, would supplement the transit system. Bicycle and pedestrian facilities would connect essential destinations within communities through an integrated bike and trail network. A regional managed lane system with multi-lane express lanes facilities would improve congestion management, and transit would be implemented for more reliability in service to increase transit ridership.

To achieve the level of infill development and transit performance for Alternative 2, land use assumptions were made that go beyond the federal requirements of what is reasonable to assume. For instance, the alternative relies on a higher amount of attached housing, especially near transit, than the market and financial incentives currently will support. Federal law requires that an RTP be "financially constrained," meaning the estimated cost of investments must not exceed the amount of funding estimated to be reasonably available throughout the planning period. The alternative also assumes that locally approved developments in Developing Communities do not move forward – a condition that would be challenging to realize because it is difficult to use policy to stop vested growth. Additionally, Alternative 2 includes a high funding allocation for transit and relies on an exceptionally high farebox recovery rate, which would be unlikely to occur under current operations.

Table 4-2 Expected Employment and Housing Growth by Community Type (Employees and Dwelling Units) for Alternative 2

Community Type	2020 Base Year: Jobs	2020 Base Year: Housing Units	2025 Blueprint 2020-2050 Growth: Jobs	2025 Blueprint 2020-2050 Growth: Housing Units	Infill Alternative 2020-2050 Growth: Jobs	Infill Alternative 2020-2050 Growth: Housing Units
Center and Corridor Communities	44%	13%	31%	33%	45%	50%
Established Communities	52%	76%	54%	31%	40%	35%
Developing Communities	2%	2%	15%	34%	15%	15%
Rural Residential Communities	2%	7%	1%	1%	0%	1%

Source: Based on the Blueprint Pathways Summary, SACOG 2024.

ATTAINMENT OF PROJECT OBJECTIVES

This alternative would have the smallest amount of acreage converted for development all the alternatives due to the fact that it has the highest proportion of growth in Center and Corridor Communities and the highest proportion of compact housing- such as small lot single family homes or attached homes- of all of the alternatives. As such, this alternative would also result in the smallest amount of converted farmland and impacted biological resources. This alternative also meets the requirements for regional transportation plans and achieves the GHG reduction targets assigned to SACOG by CARB.

Due to the compact development pattern and strong emphasis on transit investment, this alternative would be expected to have the highest increase in the share of commute trips made by transit, walking, or biking. The transportation system improvements under this alternative would be substantially consistent with the improvements in the 2025 Blueprint. As a result, this alternative would achieve the project objective related to building and

maintaining a safe, reliable, and multimodal transportation system in a manner similar to the project. Also, like the 2025 Blueprint, this alternative would replace gas tax reliance with a mileage-based fee structure.

ENVIRONMENTAL IMPACTS

Aesthetics

Compared to the 2025 Blueprint, the Infill Development Focused Alternative concentrates more growth into Center and Corridor Communities, including growth that would occur in Developing Communities under the 2025 Blueprint. The potential for substantial degradation of visual character or quality of public views of sites and their surroundings in non-urbanized areas would be less under this alternative as compared to the 2025 Blueprint because a smaller share of the projected land use pattern would be located within existing non-urbanized areas. With a more compact projected land use pattern, this alternative would have less impact to existing visual character and the quality of public views of sites and their surroundings in non-urbanized areas. Impacts to scenic quality in urbanized areas would be the same as the 2025 Blueprint because existing zoning and other regulations governing scenic quality are mandatory and would be equally enforced under this alternative. The more compact land use pattern of this alternative would introduce fewer sources of nighttime lighting in areas where existing nighttime views are more likely to be adversely affected by substantial sources of outdoor lighting.

The potential to affect scenic vistas and other scenic resources may also be reduced because less development would occur outside of Center and Corridor Communities and Established Communities. Further, the intense infill and redevelopment required under this alternative would potentially lead to the redevelopment of dilapidated or underutilized properties. This could spur investments in the areas that lead to other amenities, like street trees and landscaping. Like the 2025 Blueprint, these impacts would likely be significant and unavoidable because SACOG cannot require the implementing agency to adopt mitigation and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. With implementation of the mitigation measures identified in this EIR, impacts would be less than significant. The impact of this alternative would be **slightly less** than the impact of the 2025 Blueprint.

Agricultural and Forestry Resources

Conversion of agricultural land (including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance), forest land, timberland, and timberland zoned Timberland Production to non-agricultural, non-forest, or non-timber uses under this alternative would be less than under 2025 Blueprint because the projected land use pattern of Alternative 2 would be more compact, and less growth would occur in Developing Communities. The more compact land use pattern would reduce the amount of land disturbance in areas with agricultural land, forest land, and timberland. The potential for conflicts with zoning, land use designations, Williamson Act contracts, and/or other applicable regulations that protect agricultural and forestry resources and timberlands would also be less for the same reasons. Similarly, the potential for other changes that could result in the conversion of agricultural land, forest land, and timber land to developed land uses would be less due to decreases in urban-rural edge areas under this alternative as compared to the 2025 Blueprint. Mitigation measures identified for the 2025 Blueprint would be applicable. These mitigation measures require the permanent protection of agricultural and forest land, as well as measures to minimize indirect conversion of farmland and manage growth at the rural-urban interface. However, because a net loss of agricultural land would still occur, this impact would likely be significant and unavoidable. The impact of this alternative would be **slightly less** than the impact of the 2025 Blueprint.

Air Quality

Regional mobile source emissions of criteria air pollutants and ozone precursors would be similar to the 2025 Blueprint under this alternative. The similar emissions of criteria air pollutants and ozone precursors would result in similar adverse health outcomes from greater exposure to concentrations of criteria air pollutants in excess of the NAAQS and CAAQS. This alternative would have the same potential to conflict with an applicable air quality plan as the 2025 Blueprint.

The number of sensitive receptors exposed to substantial concentrations of TACs would likely be greater under this alternative as compared to the 2025 Blueprint. As described above, TACs are pollutants of local concern that dissipate quickly from their source. Although the emphasis on transit in this alternative may reduce TAC emissions from area roadways, the overall number of sensitive receptors exposed to TAC emissions would likely be greater under this alternative because its more compact land use pattern would allocate more people and housing units into Center and Corridor Communities while also adding more vehicle trips to area roadways and potentially exacerbating TAC emissions. Housing units in these communities are more likely than other community types to be located in close proximity to roadways and freeways that generate substantial concentrations of TAC emissions. This alternative would have a similar potential to generate odors as the 2025 Blueprint. It is possible that odor impacts could be greater due to more concentration of development in a smaller area; therefore, exposing more people to any one location that emits odors.

Long-term operational criteria air emissions associated with area sources, such as natural gas emissions, landscaping equipment, applications of architectural coatings, and use of consumer products, would be less under this alternative as compared to the 2025 Blueprint. Based on the more compact development pattern, this alternative would likely result in relatively fewer rural residential and large-lot single family homes, and relatively more small-lot single-family or attached homes. Rural residential and large-lot single family homes tend to have higher energy (including natural gas) consumption and involve greater use of landscaping equipment and architectural coatings (and higher associated criteria air pollutant emissions) than small-lot single-family or attached homes.

Mitigation measures identified for the 2025 Blueprint would be applicable and, if implemented, would reduce impacts to a less-than-significant level. Mitigation measures would require design measures that reduce criteria pollutant emissions, reduce emissions from typical construction, conduct site-specific health risk assessments, implement strategies in the CARB technical advisory related to pollutant exposure near roadways, and implement best practices related to odors. However, like the 2025 Blueprint, these impacts would likely be significant and unavoidable because SACOG cannot require the implementing agency to adopt mitigation, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. The impact of this alternative would be **slightly less** than the impact of the 2025 Blueprint.

Biological Resources

Impacts (direct or through habitat modification) on candidate, sensitive, or special status species (including plants, wildlife, and fish) under this alterative would be less than under the 2025 Blueprint because this alternative's projected land use pattern would be more compact. Compared to Alternative 2, the 2025 Blueprint forecasts more development in Developing Communities, which would involve more land disturbance in areas that are less developed and include more biological resources than Center and Corridor and Established communities. The potential for impacts to riparian habitats, oak woodlands, other sensitive natural communities, state or federally protected wetlands, migratory wildlife corridors and native wildlife nursery sites, adopted HCP or NCCP, other approved habitat conservation plans, and local policies and ordinances protecting biological resources would be lower under Alternative 2 for the same reasons. This alternative would have less impact to fish or wildlife species' habitat and population levels, the range of endangered or threatened species, and potential to threaten to eliminate a plant or animal community. Construction-related impacts to biological resources would likely to be less under this alternative for the reasons provided above. The more compact land use pattern and fewer roadway and highway lane miles of this alternative mean that less construction activities would occur in areas with biological resources and there would be fewer direct and indirect impacts to biological resources during construction activities (e.g., equipment staging, construction lighting and noise, dust generation and exhaust emissions).

Mitigation measures identified for the 2025 Blueprint would be applicable. These measures require the completion of project-level biological resource assessments; identification and minimization of impacts to special status species and habitats, waters, and movement corridors; and avoidance and minimization of effects on biological resources protected by local ordinances. Like the 2025 Blueprint, these impacts would likely be significant and unavoidable because SACOG cannot require the implementing agency to adopt mitigation and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. With implementation of the mitigation measures

identified in this EIR, impacts would be less than significant. The impact of this alternative would be **slightly less** than the impact of the 2025 Blueprint.

Cultural Resources

Development that occurs to accommodate the Regional Growth Projection under Alternative 2 could cause a substantial adverse change in the significance of a historical resource, cause an adverse change in the significance of unique archaeological resources, or disturb human remains during grading. Impacts to cultural resources under this alterative would be slightly less than under the 2025 Blueprint because this alternative's projected land use pattern would be more compact. The reduced land disturbance, such as grading and excavation, resulting from the projected land use pattern of this alternative would result in lower likelihood of encountering unknown surface or subsurface archaeological, paleontological, and tribal cultural resources, or human remains. Mitigation measures identified for the 2025 Blueprint would be applicable. These measures would require the completion of project-specific historic built environment and archaeological resource studies to identify project-level mitigation, and reduction in the visibility of and access to archaeological resources. However, as with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable because destruction or substantial alteration of the contributing physical characteristics or character of the physical setting of an archaeological resource could still occur. The impact of this alternative would be **slightly less** than the impact of the 2025 Blueprint.

Geology, Soils, and Paleontological Resources

The potential for the plan area to experience seismic activity and seismic-related ground failure, as well as the degree to which new development would be required by existing laws and regulations to address these risks, would not change under the Infill Development Focused Alternative. Because the proportion of growth in undeveloped areas (i.e., Developing Communities and Rural Residential Communities) would be less, the potential to generate substantial soil erosion or encounter potential soil hazards (e.g., soils susceptible to expansion, landslide, lateral spreading, subsidence, liquefaction, or collapse) would be slightly less, as would the potential to directly or indirectly destroy a unique paleontological resource or geologic feature.

Mitigation measures identified for the proposed 2025 Blueprint related to effects on paleontological resources would be applicable. Like the 2025 Blueprint, these impacts would likely be significant and unavoidable because SACOG cannot require the implementing agency to adopt mitigation and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. With implementation of the mitigation measures identified in this EIR, impacts would be less than significant. Overall, the impact of this alternative would be **slightly less** than the impact of the 2025 Blueprint.

Greenhouse Gas Emissions and Energy

This alternative would increase the proportion of housing and population growth accommodated in Center and Corridor Communities and Established Communities compared to the 2025 Blueprint. This focus on infill growth would generally result in smaller, more efficient development and a transportation network that reduces VMT. This alternative would also support the same transportation project list as the 2025 Blueprint. As a result, there is less potential for this alternative to conflict with state and local plans for the reduction of GHG emissions or result in wasteful or unnecessary use of energy. Mitigation measures identified for the 2025 Blueprint would be applicable. These measures require coordination with local agencies to reduce GHG emissions from all sectors, and implementation of all feasible on- and off-site measures to reduce GHG emissions. However, as with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable. SACOG's support of local climate change reduction programs would be consistent with guidance in the 2022 Scoping Plan, which indicates that local and regional GHG reduction efforts are necessary for the state to meet its long-term climate change goals. However, there is no assurance that local jurisdictions would implement the necessary measures to reduce the plan area's fair share GHG inventory to levels consistent with statewide reduction targets. Additionally, SACOG cannot require local implementing agencies to adopt GHG reduction plans or policies. The impact of this alternative would be **slightly less** than the impact of the 2025 Blueprint.

Hazards and Hazardous Materials

Hazardous materials impacts to the public or the environment associated with construction activities and operations under this alternative would be the same as the impacts under the 2025 Blueprint. This is because of the numerous federal, state, and local requirements and regulations that minimize the creation of significant hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials, reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and handling of hazardous materials, substances, and waste within 0.25 mile of an existing or proposed school. This alternative would reduce growth in Developing Communities and may reduce the potential to disturb certain types of existing hazardous materials sites (e.g., leaking underground storage tanks), but may increase the potential for development to be located on or near other types of legacy contamination (e.g., from historic manufacturing or industrial uses). Effects related to airport hazards would likely be reduced because Developing Communities are more likely to be planned near airports that are currently located outside of the areas with existing development (e.g., Mater Airport, Sacramento International Airport).

The mitigation measure identified for the proposed 2025 Blueprint, which would require site-specific investigations to characterize the potential presence of hazardous waste, would be applicable. Like the 2025 Blueprint, these impacts would likely be significant and unavoidable because SACOG cannot require the implementing agency to adopt mitigation, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. With implementation of the mitigation measures identified in this EIR, impacts would be less than significant. Overall, the impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Hydrology and Water Quality

Impacts associated with hydrology and water quality under this alternative would be less than under the 2025 Blueprint because the more compact land use pattern would result in disturbance to a smaller land area during construction activities and would permanently convert a smaller amount of land to impervious surfaces, such as parking lots, buildings, roadways, highways, and other paved areas, as compared to the 2025 Blueprint. In addition, the reduced area permanently converted to impervious surfaces would decrease the potential volume and stormwater quality impacts and result in less interference with groundwater recharge and potential to alter drainage patterns in a manner that could increase erosion, siltation, and flooding relative to the 2025 Blueprint. Because the projected land use pattern of this alternative would convert less land to impervious surfaces that would collect water quality contaminants, this alternative would decrease the risk of release of pollutants if such impervious surfaces areas were inundated during a flood. The projected land use pattern and planned transportation improvements of this alternative would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. Effects on hydrology and water quality would be similar to the 2025 Blueprint. The impact would likely be less than significant. The impact of this alternative would be **slightly less** than the impact of the 2025 Blueprint.

Land Use and Planning

The more compact land use pattern of this alternative provides more connectivity within existing communities, so it would not physically divide any existing communities. This alternative would substantively satisfy the SCS requirements of SB 375, including achievement of the 19 percent per capita passenger vehicle carbon dioxide (CO_2) emissions reduction target established for SACOG by CARB. This alternative would also direct growth to areas within city boundaries in the Delta, and all subsequent projects that fall within the LURMP boundaries will be required to demonstrate consistency with the LURMP and satisfy mitigation requirements. Because this alternative would include a more compact land use pattern, it would have fewer impacts to resources within the Delta that are protected by the provisions of the LURMP, including agriculture, biological resources, and recreational land, and from contaminated runoff and construction of new utilities facilities, especially at the rural-urban edge. The impact would likely be less than significant. The impact of this alternative would be **slightly less** than the impact of the 2025 Blueprint.

Mineral Resources

This alternative would result in a similar amount of growth in existing communities, with greater focus on Center and Corridor Communities. As described for the 2025 Blueprint, the potential for loss of availability of a designated

mineral resource of value to the region the state, or the loss of availability of a locally important mineral resource recovery site, related to Alternative 2 would be less than significant. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Noise and Vibration

The more compact land use pattern of this alternative would direct less housing growth to Developing Communities, decreasing construction and operational noise levels relative the 2025 Blueprint in areas that tend to have lower existing noise levels than more developed and urbanized communities. As a result, noise thresholds would be less likely to be exceeded. The projected land use pattern of this alternative, while more compact than the 2025 Blueprint, would not result in land use types that would result in different levels of vibration or groundborne noise. Transportation-generated noise would be the same. Mitigation measures identified for the 2025 Blueprint would be applicable. These measures would require that implementing agencies employ measures to reduce noise associated with construction, traffic, and stationary noise from new developments. Measures would also address construction vibration and operational vibration from new and expanded rail systems. However, as with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable. Although there would be variation in where some of the noise and vibration would occur, at the plan level the noise levels generated would not be substantially different than those that would be generated under the 2025 Blueprint because the same total population, housing, and employment are assumed. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Population, Employment, and Housing

The Infill Development Focused Alternative would not result in the potential for regional impacts associated with displacement of substantial numbers of people or housing that results in construction of replacement housing elsewhere. Furthermore, the alternative would not result in the potential for substantial induced unplanned population growth in an area, either directly or indirectly. Like the 2025 Blueprint, the alternative would establish a regional development pattern that can accommodate all forecast growth in the region. This impact would be **less than significant**. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Public Services

The population growth that is forecast to occur with the Regional Growth Projection would increase demand for public services including police protection, fire protection, emergency response, school, library, and social services. Increases in demand for public services would correlate with the location of development identified in the projected land use pattern of Alternative 2. Because this alternative focuses more growth in Center and Corridor Communities, existing services in these areas could be strained if the total number of residents served increases. However, less expansion of services or formation of new community service district would be required due to the limited growth in Developing Communities. This alternative is anticipated to result in effects on public services that are similar to those that would be generated under the 2025 Blueprint, because the same total population, housing, and employment are assumed. As described for the 2025 Blueprint, because the population is forecasted to increase, it is possible there would be increased demand for public services that could impede the achievement of acceptable service levels and require new facilities to serve the population. During project planning, design, and project-level environmental review, implementing agencies would ensure that public services would be available to comply with applicable service levels. This would be documented prior to project approval in the form of a capacity analysis, provider will-serve letter, or equivalent documentation. As with implementation of the 2025 Blueprint, the impact would be significant and unavoidable because SACOG cannot require the implementing agency to comply with service levels, and it is ultimately the responsibility of the implementing agency to determine service levels and adopt project-specific mitigation, as applicable. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Recreation

This alternative is anticipated to result in impacts related to parks and recreation that are similar to those associated with the 2025 Blueprint because the same total population, housing, and employment are assumed. All new or expanded facilities necessary to serve new development are captured in the communities where growth is forecast to occur. There could also be less physical environmental effects from the construction of new recreational facilities in

Developing Communities under this alternative due to the focus on infill growth. However, since more new development would be infill under Alternative 2, the total number of residents served by existing facilities may increase more than with implementation of the 2025 Blueprint. As with implementation of the 2025 Blueprint, the impact would be significant and unavoidable because SACOG does not have the authority to ensure that all future development meets established park and recreation standards. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Transportation

The projected land use pattern of this alternative would be more transit-oriented than the that of the 2025 Blueprint and would result in higher levels of transit ridership, walking, and biking for commute trips and all trips, and it would be more complementary to existing and planned bicycle and pedestrian facilities. This may result in a reduction in VMT, but not to below levels required to meet the State's 2050 climate goals. The projected land use pattern of this alternative would locate fewer homes and fewer lane miles of road and highway network improvements in Developing Communities, which is expected to result in less interference with the movement of agricultural equipment and farm products on rural roadways. Mitigation measures identified for the 2025 Blueprint that would implement VMT reduction strategies would be applicable. However, as with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable because SACOG cannot require the implementing agency to comply with service levels, and it is ultimately the responsibility of the implementing agency to determine service levels and adopt project-specific mitigation, as applicable. In addition, as described for the 2025 Blueprint, additional State policy actions and funding would be required to close the gap between VMT reductions that can be achieved at the regional level and the State's goals. The impact of this alternative would be **slightly less** than the impact of the 2025 Blueprint.

Tribal Cultural Resources

This alternative would result in less growth in the Developing Communities. By subjecting a smaller land area to disturbance and physical change, this alternative would result in less indirect impacts to tribal cultural resources by resulting in a smaller increase in public accessibility to tribal cultural resources relative to the 2025 Blueprint. Construction activities under this alternative would also have less impact to tribal cultural resources and important examples of major periods of California history or prehistory. Mitigation measures identified for the 2025 Blueprint that would require worker awareness training, stopping ground disturbance in the event of an unanticipated discovery, and reducing the visibility of or access to a tribal cultural resource would be applicable. However, as with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable. The impact of this alternative would be **slightly less** than the impact of the 2025 Blueprint.

Utilities and Service Systems

This alternative is anticipated to result in impacts associated with utilities and service systems (both construction-related and operational) similar to those that would be generated under the 2025 Blueprint because the same total population, housing, and employment are assumed. Like with the 2025 Blueprint, effects could occur relative to the availability of water supplies and availability of wastewater treatment facilities to serve new growth. However, because this alternative would result in fewer rural residential and large-lot single-family homes (which have higher demand for water for reasons such as increased irrigation demand for landscaping areas and additional appliances and fixtures that use potable water), the demand for surface and groundwater supplies may be less than anticipated for the 2025 Blueprint. As a result, this alternative could have slightly less impact on water storage, conveyance, distribution, and treatment facilities than the 2025 Blueprint and would be less likely to result in construction of new, expanded, or relocated facilities.

Impacts related to the relocation or construction of new or expanded water, wastewater, water treatment, stormwater drainage, electrical power, natural gas, or telecommunications infrastructure would not result in unique physical environmental impacts not covered in the analysis of growth under this alternative. This alternative may result in less impacts related to necessary utility expansions due to the more compact land use pattern that makes it more efficient to serve the population. All of the alternatives would be required to follow the same federal, state, and local statutes and regulations related to solid waste. This alternative would have the same impact related to solid waste generation

and conflicts with solid waste management and reduction statutes and regulations. Mitigation identified for the 2025 Blueprint requiring water conservation measures and coordination with local public service providers would be applicable. However, as with implementation of the 2025 Blueprint, the impact would be significant and unavoidable because the effectiveness of project-level mitigation cannot be known at this time. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Wildfire

This alternative would result in fewer new homes within Rural Residential Communities, which have a higher risk of wildfire than other community types and, when developed, are more likely to exacerbate post-fire flooding or landslide hazards that would require emergency responses or emergency evacuation. Due to the fact that less fire-prone acreage would be developed under this alternative, this alternative would result in slightly less wildfire hazards than the 2025 Blueprint. The mitigation measure identified for the 2025 Blueprint, which requires preparation of a fire safe plan for land use projects located in high fire hazard severity zones, would be applicable. However, as with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable**.** The impact of this alternative would be **slightly less** than the impact of the 2025 Blueprint.

4.5.3 Alternative 3: Prioritized Investments in VMT Reduction Alternative

The Prioritized Investments in VMT Reduction Alternative would prioritize funding for an expanded list of transportation projects that are associated with VMT reduction. As a result, far fewer maintenance and expansion projects would receive funding. This alternative would both directly reduce VMT and reduce the GHG emissions associated with vehicle travel. By making non-automotive travel a highly attractive and viable alternative, this alternative could reduce impacts to local air quality and noise, enhancing overall public health. The Regional Growth Projection and Development Pattern would be the same under this alternative as identified in the 2025 Blueprint.

This alternative would have the following specific features:

- Active Transportation and Micro-Mobility: This alternative aggressively expands bicycle, pedestrian, and micro-mobility infrastructure across the six-county region, reprioritizing roadway and street infrastructure toward active and micro-mobility travel modes. This includes both investments in regional bicycle superhighways, interconnected trails, safe routes to schools, and comprehensive pedestrian infrastructure, and regional policy incentives and financial subsidies for personal micro-mobility vehicles and e-bike use. The implementation of this alternative would result in changes to the existing environment through reduction in road capacity for automobiles, reallocating roadway space to protected bike lanes, pedestrian plazas, and micro-mobility pathways. New development under this alternative would be required to prioritize walkability, active transportation amenities, and integrated micro-mobility stations.
- Regional Pricing and Demand Management: This alternative focuses on regional transportation demand management (TDM) strategies and market-based pricing to strongly discourage personal vehicle use, especially during peak commute periods. This alternative assumes that the road use fees are approximately five times higher than envisioned in the proposed plan to address the transportation needs. Alternative 3 also expands region-wide incentives for telecommuting, remote working hubs, flexible scheduling, and other employer-based TDM programs.
- Electric and Zero-Emission Vehicle Infrastructure: Finaly, Alternative 3 places strategic focus on accelerating widespread adoption of electric and zero-emission vehicles (ZEVs) across the six-county region, accompanied by robust infrastructure and policy incentives to encourage rapid transition away from combustion engines. Implementation of this aspect of the alternative would include the rapid expansion of charging infrastructure, targeting residential, workplace, and publicly accessible locations, ensuring comprehensive geographic coverage.

ATTAINMENT OF PROJECT OBJECTIVES

Alternative 3 would meet the project objectives related to land use in the same manner as the 2025 Blueprint because the alternative would not affect the land use components of the plan. Like the 2025 Blueprint, this alternative would satisfy the objectives related to building vibrant communities, providing a mix of housing types, revitalization of commercial corridors, and creating complete communities.

Alternative 3 would foster the next generation of mobility solutions and would fulfill this objective. Although the support for ZEV infrastructure envisioned under Alternative 3 would reduce vehicle emissions, these reductions could not be attributed to the GHG reduction targets assigned to SACOG by CARB, and would not contribute to satisfaction of the SB 375 requirements. The emphasis on active transportation, micromobility, and TDM strategies may be sufficient to attain the objective to achieve the GHG reduction target set by CARB.

The active transportation and micro-mobility element of this alternative would increase the emphasis of the plan on multimodal transportation and would satisfy the project objective to build and maintain a safe, reliable, and multimodal transportation system. Alternative 3 includes and accelerates the road user fees to generate greater revenue and exercise a greater influence on travel behavior.

ENVIRONMENTAL IMPACTS

Aesthetics

Alternative 3 would not result in substantial changes to the aesthetic effects of the 2025 Blueprint. TDM and ZEV supportive policies would not substantially affect visual resources. Where they result in improvements to public streetscapes and rights-of-way, alternative transportation projects that promote trails and redesign existing roads to include bicycle and pedestrian friendly features may benefit the aesthetic environment in Center and Corridor and Established communities. In addition, because fewer transportation projects would occur in Developing Communities, this alternative would have less impact on existing visual character and the quality of public views of sites and their surroundings in non-urbanized areas. The potential to affect scenic vistas and other scenic resources, as well as effects related to light and glare, may also be reduced because less transportation development would occur outside of existing communities. Impacts to scenic quality in urbanized areas would be same as the 2025 Blueprint because existing zoning and other regulations governing scenic quality are mandatory and would be equally enforced under this alternative. Like the 2025 Blueprint, these impacts would likely be significant and unavoidable because SACOG cannot require the implementing agency to adopt mitigation and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. With implementation of the mitigation measures identified in this EIR, impacts would be less than significant. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Agricultural and Forestry Resources

Conversion of agricultural land (including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance), forest land, timberland, and timberland zoned Timberland Production to non-agricultural, non-forest, or non-timber uses under this alternative would be similar to the 2025 Blueprint because the projected land use pattern not change and would result in a similar potential for land development in Developing Communities and Rural Residential Communities, which are the community types most likely to support agricultural and forested lands. Mitigation measures identified for the 2025 Blueprint would be applicable. These mitigation measures require the permanent protection of agricultural and forest land, as well as measures to minimize indirect conversion of farmland and manage growth at the rural-urban interface. However, as with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Air Quality

Regional mobile source emissions of criteria air pollutants and ozone precursors would be less than the 2025 Blueprint under this alternative because of the emphasis on modes of travel and vehicle types that reduce emissions.

This could result in fewer adverse health outcomes from exposure to concentrations of criteria air pollutants in excess of the NAAQS and CAAQS and less potential to conflict with an applicable air quality plan. The number of sensitive receptors exposed to TACs may also be fewer. Although this alternative would not change the land use or Development Pattern, it could reduce congestion and result in fewer TAC-emitting vehicles on existing roads. Long-term operational criteria air emissions associated with area sources and potential for exposure to odors would be the same as disclosed for the 2025 Blueprint.

Because of the potential to further reduce vehicle travel, the air quality impacts of implementing Alternative 3 would be reduced compared to the 2025 Blueprint. Mitigation measures identified for the 2025 Blueprint would be applicable. Mitigation measures would require design measures that reduce criteria pollutant emissions, reduce emissions from typical construction, conduct site-specific health risk assessments, implement strategies in the CARB technical advisory related to pollutant exposure near roadways, and implement best practices related to odors. However, like the 2025 Blueprint, these impacts would likely be significant and unavoidable because SACOG cannot require the implementing agency to adopt mitigation, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. The impact of this alternative would be **slightly less** than the impact of the 2025 Blueprint.

Biological Resources

Impacts (direct or through habitat modification) on candidate, sensitive, or special status species (including plants, wildlife, and fish) under this alterative would be similar to the 2025 Blueprint because this alternative's projected land use pattern would be the same as proposed in the 2025 Blueprint. The potential for impacts to riparian habitats, oak woodlands, other sensitive natural communities, state or federally protected wetlands, migratory wildlife corridors and native wildlife nursery sites, adopted HCP or NCCP, other approved habitat conservation plans, and local policies and ordinances protecting biological resources would be similar for the same reasons. This alternative would also have similar impacts to fish or wildlife species' habitat and population levels, the range of endangered or threatened species, and potential to threaten to eliminate a plant or animal community. The reduced land disturbance associated with fewer roadway and highway lane miles of this alternative could result in less construction activity in areas with biological resources, and would result in fewer direct and indirect impacts to biological resources during construction activities (e.g., equipment staging, construction lighting and noise, dust generation and exhaust emissions). While the transportation projects identified in this alternative would also have the potential to damage habitat or directly harm sensitive species, these types of projects may be more likely to occur within an established right of way or consist of projects that are more compatible with wildlife preservation (e.g., open space trails).

Mitigation measures identified for the 2025 Blueprint would be applicable. These measures require the completion of project-level biological resource assessments; identification and minimization of impacts to special status species and habitats, waters, and movement corridors; and avoidance and minimization of effects on biological resources protected by local ordinances. Like the 2025 Blueprint, these impacts would likely be significant and unavoidable because SACOG cannot require the implementing agency to adopt mitigation and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. With implementation of the mitigation measures identified in this EIR, impacts would be less than significant. Overall, the impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Cultural Resources

Development that occurs to accommodate the Regional Growth projection under Alternative 3 could cause a substantial adverse change in the significance of a historical resource, an adverse change in the significance of unique archaeological resources, or disturb human remains during grading. Impacts to cultural resources under this alterative would be similar to the 2025 Blueprint because this alternative's projected land use pattern would be similar. Mitigation measures identified for the 2025 Blueprint would be applicable. These measures would require the completion of project-specific historic built environment and archaeological resource studies to identify project-level mitigation, and reduction in the visibility of and access to archaeological resources. However, as with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable because destruction or substantial

alteration of the contributing physical characteristics or character of the physical setting of an archaeological resource could still occur. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Geology, Soils, and Paleontological Resources

The potential for the plan area to experience seismic activity and seismic-related ground failure, as well as the degree to which new development would be required by existing laws and regulations to address these risks, would not change under Alternative 3. Because the proportion of growth in undeveloped areas (i.e., Developing Communities and Rural Residential Communities) would be the same, the potential to generate substantial soil erosion or encounter potential soil hazards (e.g., soils susceptible to expansion, landslide, lateral spreading, subsidence, liquefaction, or collapse) would be the same, as would the potential to directly or indirectly destroy a unique paleontological resource or geologic feature.

Mitigation identified for the proposed 2025 Blueprint related to effects on paleontological resources would be applicable. Like the 2025 Blueprint, these impacts would likely be significant and unavoidable because SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. With implementation of the mitigation measure identified in this EIR, impacts would be less than significant. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Greenhouse Gas Emissions and Energy

Compared to the 2025 Blueprint, this alternative would increase the proportion transportation funding used to support projects that would directly reduce GHG emissions through reductions in VMT or use of alternative fuels. This focus on transportation projects that reduce GHG emissions would reduce the potential for this alternative to conflict with state and local plans for the reduction of GHG emissions or result in wasteful or unnecessary use of energy for transportation. Construction and building energy use would not change under this alternative. Overall, GHG emission and energy impacts would be less with the adoption and implementation of Alternative 3. Mitigation measures identified for the 2025 Blueprint would be applicable. These measures require coordination with local agencies to reduce GHG emissions form all sectors, and implementation of all feasible on- and off-site measures to reduce GHG emissions. However, as with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable. SACOG's support of local climate change reduction programs would be consistent with guidance in the 2022 Scoping Plan, which indicates that local and regional GHG reduction efforts are necessary for the state to meet its long-term climate change goals. However, there is no assurance that local jurisdictions would implement the necessary measures to reduce the plan area's fair share GHG inventory to levels consistent with statewide reduction targets. Additionally, SACOG cannot require local implementing agencies to adopt GHG reduction plans or policies. The impact of this alternative would be **slightly less** than the impact of the 2025 Blueprint.

Hazards and Hazardous Materials

The Development Pattern would not change with this alternative, and hazardous materials impacts to the public or the environment associated with construction activities and operations under this alternative would be the same as the impacts under the 2025 Blueprint. This is because of the numerous federal, state, and local requirements and regulations that minimize the creation of significant hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials, reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and related to handling of hazardous materials, substances, and waste within 0.25 mile of an existing or proposed school.

The mitigation measure identified for the proposed 2025 Blueprint, which would require site-specific investigations to characterize the potential presence of hazardous waste, would be applicable. Like the 2025 Blueprint, these impacts would likely be significant and unavoidable because SACOG cannot require the implementing agency to adopt mitigation and it is ultimately the responsibility of a lead agency to determine and adopt project-specific mitigation. With implementation of the mitigation measures identified in this EIR, impacts would be less than significant. Overall, the impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Hydrology and Water Quality

As described above, this alternative would not result in changes to the regional growth pattern. As a result, the potential for the alternative to result in different effects on hydrology and water quality would be limited and the impacts would generally be similar to the 2025 Blueprint. The decreased land area permanently converted to impervious surfaces associated with not constructing the added lane miles in the 2025 Blueprint would decrease the potential volume and increase the water quality of stormwater and non-stormwater flows relative to the 2025 Blueprint. Fewer new impervious surfaces also would reduce interference with groundwater recharge and result in less alteration of drainage patterns in a manner that would increase the potential for substantial erosion, siltation, and flooding relative to the 2025 Blueprint. However, this change would not be substantial on a regional scale, and overall the impacts of Alternative 3 would be similar to the 2025 Blueprint. Impacts to hydrology and water quality would likely be less than significant. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Land Use and Planning

The elements of the project that would change under Alternative 3 would not substantially affect the potential for the project to divide established communities, conflict with the State requirements for an SCS, or conflict with Delta planning. The planned transportation improvements of this alternative would increase multimodal connectivity and reduce the potential for the plan to divide established communities. Based on the increased investment in VMT-reducing projects, this alternative is anticipated to satisfy the SB 375-mandated VMT reduction target and maintain consistency with established SCS requirements. Like the 2025 Blueprint, this alternative would direct growth to areas within city boundaries in the Delta, and all subsequent projects that fall within the LURMP boundaries would be required to demonstrate consistency with the LURMP and satisfy mitigation requirements. Overall, the impact of Alternative 3 would be **slightly less** than the project and would likely be less than significant.

Mineral Resources

This alternative would not change the growth geographies identified in the 2025 Blueprint and would result in a similar amount of growth in established communities. As described for the 2025 Blueprint, the potential for loss of availability of a designated mineral resource of value to the region the state, or the loss of availability of a locally important mineral resource recovery site related to Alternative 3 would likely be less than significant. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Noise and Vibration

Noise and vibration generated by construction and stationary sources under Alternative 3 would be the same as the 2025 Blueprint because the land use pattern would be the same. The planned transportation improvements of this alternative would include fewer lane miles of roadway and highway improvements and would promote the use of alternative modes of transportation. Although lower VMT would generally result in less traffic-generated noise and vibration, the change may not be sufficient to result in substantial reductions at the plan level. Mitigation measures identified for the 2025 Blueprint would be applicable. These measures would require that implementing agencies employ measures to reduce noise associated with construction, traffic, and stationary noise from new development. Measures would also address construction vibration and operational vibration from new and expanded rail systems. However, as with implementation of the 2025 Blueprint, the impact would likely be **significant and unavoidable**. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Population, Employment, and Housing

The Prioritized Investments in VMT Reduction Alternative would not result in the potential for regional impacts associated with displacement of substantial numbers of people or housing that results in construction of replacement housing elsewhere. Furthermore, the alternative would not result in the potential for substantial induced unplanned population growth in an area, either directly or indirectly. Like the 2025 Blueprint, the alternative would establish a regional development pattern that can accommodate all forecast growth in the region This impact would likely be less than significant. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Public Services

This alternative is anticipated to result in effects on public services that are similar to those that would be generated under the 2025 Blueprint, because the same total population, housing, and employment are assumed. The total number of residents served by existing providers and response times may increase due to population growth in existing communities. As described for the 2025 Blueprint, because the population is forecasted to increase, it is possible there would be increased demand for public services that could impede the achievement of acceptable service levels. During project planning, design, and project-level environmental review, implementing agencies would ensure that adequate service levels for public services are achieved. This would be documented prior to project approval in the form of a capacity analysis, provider will-serve letter, or equivalent documentation. Because population growth that is forecast to occur with the Regional Growth Projections would be the same under all alternatives, and Alternative 3 does not change the Development Pattern, the increase in demand for public services including police protection, fire protection, emergency response, school, library, and social services would be the same as disclosed for the 2025 Blueprint. As with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable because SACOG cannot require the implementing agency to comply with service levels, and it is ultimately the responsibility of the implementing agency to determine service levels and adopt project-specific mitigation, as applicable. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Recreation

This alternative is anticipated to result in effect on parks and recreation that are similar to those that would be generated under the 2025 Blueprint because the same total population, housing, and employment are assumed. Like the 2025 Blueprint, most (roughly 70 percent) of new growth would occur in areas that have established park facilities. As a result, the total number of residents served by existing facilities may increase. As with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable because SACOG does not have the authority to ensure that all future development meets established park and recreation standards. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Transportation

Alternative 3 would add transportation projects and prioritize projects to focus efforts on GHG reduction. This is anticipated to result in higher levels of transit ridership, walking, and biking for commute trips and all trips, which may result in a reduction in VMT, but not to below levels required to meet the State's 2050 climate goals. Mitigation measures identified for the 2025 Blueprint that would implement VMT reduction strategies would be applicable. However, as with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable because SACOG cannot require the implementing agency to comply with service levels, and it is ultimately the responsibility of the implementing agency to determine service levels and adopt project-specific mitigation, as applicable. In addition, as described for the 2025 Blueprint, additional State policy actions and funding would be required to close the gap between VMT reductions that can be achieved at the regional level and the State's goals. The impact of this alternative would be **slightly less** than the impact of the 2025 Blueprint.

Tribal Cultural Resources

Impacts to tribal cultural resources under this alterative would be similar to the 2025 Blueprint because this alternative's Development Pattern is the same. The potential impacts on tribal cultural resources that could result from the substantial alteration or removal of a tribal cultural resource or indirect impacts from access-related damage would be similar. Mitigation measures identified for the 2025 Blueprint that would require worker awareness training, stopping ground disturbance in the event of an unanticipated discovery, and reducing the visibility or accessibility of a tribal cultural resource would be applicable. However, as with implementation of the 2025 Blueprint, because destruction of a tribal cultural resource could still occur, the impact would likely be significant and unavoidable. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Utilities and Service Systems

This alternative is anticipated to result in impacts on utilities and service systems (both construction-related and operational) that are similar to those that would be generated under the 2025 Blueprint because the same total

population, housing, and employment numbers are assumed. Impacts related to the relocation or construction of new or expanded water, wastewater, water treatment, stormwater drainage, electrical power, natural gas, or telecommunications infrastructure would not result in unique physical environmental impacts not covered in the analysis of growth under this alternative. Effects could occur relative to the availability of water supplies and availability of wastewater treatment facilities to serve new growth. Alternative 3 would be required to follow the same federal, state, and local statutes and regulations related to solid waste, and this alternative would have the same impact related to solid waste generation and conflicts with solid waste management and reduction statutes and regulations. Mitigation identified for the 2025 Blueprint requiring water conservation measures and coordination with local public service providers would be applicable. However, as with implementation of the 2025 Blueprint, the impact would be significant and unavoidable because the effectiveness of project-level mitigation cannot be known at this time. The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

Wildfire

This alternative would result in a similar share of new homes within Rural Residential Communities, which have a higher risk of wildfire than other community types and, when developed, are more likely to exacerbate post-fire flooding or landslide hazards that would require emergency responses or emergency evacuation. Due to the similarities of the Development Pattern, this alternative would result in similar wildfire hazards as the 2025 Blueprint. The mitigation measure identified for the 2025 Blueprint, which requires preparation of a fire safe plan for land use projects located in high fire hazard severity zones, would be applicable. However, as with implementation of the 2025 Blueprint, the impact would likely be significant and unavoidable**.** The impact of this alternative would be **similar** to the impact of the 2025 Blueprint.

4.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an EIR identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. This chapter analyzes the effectiveness of the alternatives in meeting the objectives of the project and how the potential impacts of the alternatives compare to the potential impacts of the 2025 Blueprint. Table 4-3 provides a summary comparison of the impacts of the alternatives to those of the 2025 Blueprint. Based on this evaluation, Alternative 2: Infill Development Focused Alternative would be the environmentally superior alternative because it would reduce most impacts as compared to the 2025 Blueprint. However, the ultimate significance determinations would be unchanged under this alternative and the overall level of impact would be similar.

Table 4-3 Summary of Environmental Effects of the Alternatives Relative to the 2025 Blueprint

Environmental Topic	2025 Blueprint	Alternative 1: No Project Alternative	Alternative 2: Infill Development Focused Alternative	Alternative 3: Prioritized Investments in VMT Reduction Alternative
Aesthetics	SM	Similar SM	Slightly less SM	Slightly less SM
Agricultural and Forestry Resources	SU	Slightly less SU	Slightly less SU	Similar SU
Air Quality	SM	Slightly greater SM	Slightly less SM	Slightly less SM
Biological Resources	SM	Similar SM	Slightly less SM	Similar SM
Cultural Resources	SU	Similar SM	Slightly less SM	Similar SM
Geology, Soils, and Paleontological Resources	SM	Similar SM	Slightly less SM	Similar SM

Environmental Topic	2025 Blueprint	Alternative 1: No Project Alternative	Alternative 2: Infill Development Focused Alternative	Alternative 3: Prioritized Investments in VMT Reduction Alternative
Greenhouse Gas Emissions and Energy	SU	Slightly greater SU	Slightly less SU	Slightly less SU
Hazards and Hazardous Materials	SM	Similar SM	Similar SM	Similar SM
Hydrology and Water Quality	LTS	Similar LTS	Slightly less LTS	Similar LTS
Land Use and Planning	LTS	Greater SU	Slightly less LTS	Slightly less LTS
Mineral Resources	LTS	Similar LTS	Similar LTS	Similar LTS
Noise and Vibration	SU	Similar SU	Similar SU	Similar SU
Population, Employment, and Housing	LTS	Similar LTS	Similar LTS	Similar LTS
Public Services	SU	Similar SU	Similar SU	Similar SU
Recreation	SU	Similar SU	Similar SU	Similar SU
Transportation	SU	Similar SU	Slightly less SU	Slightly less SU
Tribal Cultural Resources	SU	Similar SU	Slightly less SU	Similar SU
Utilities and Service Systems	SU	Similar SU	Similar SU	Similar SU
Wildfire	SU	Similar SU	Slightly less SU	Similar SU

Notes: LTS = less than significant, LTSM = less than significant with mitigation, SU = significant and unavoidable, SM = significant but could be mitigated to a less-than-significant level with the implementation of recommended mitigation, which implementing agencies can and should adopt.

5 OTHER CEQA SECTIONS

This chapter provides a discussion of potential direct and indirect growth-inducing impacts, significant and unavoidable adverse impacts, and significant and irreversible environmental changes associated with implementation of the 2025 Blueprint. Additionally, this chapter provides an analysis of the potential cumulative impacts that would result from implementation of the 2025 Blueprint together with other past, present, and probable future projects.

5.1 GROWTH INDUCEMENT

California Environmental Quality Act (CEQA) Section 21100(b)(5) specifies that the growth-inducing impacts of a project must be addressed in an environmental impact report (EIR). Section 15126.2(d) of the State CEQA Guidelines provides the following guidance for assessing growth-inducing impacts of a project:

> Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can induce growth directly, indirectly, or both. Direct growth inducement would result if a project involved construction of new housing. Indirect growth inducement would result, for instance, if implementing a project resulted in any of the following:

- substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- substantial short-term employment opportunities (e.g., construction employment) that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; and/or
- removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

Growth inducement itself is not an environmental effect but may foreseeably lead to environmental effects. If substantial growth inducement occurs, it can result in secondary environmental effects, such as increased demand for housing, demand for other community and public services and infrastructure capacity, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or animal habitats, conversion of agricultural and open-space land to urban uses, and other effects.

5.1.1 Analysis of Growth-Inducement

SACOG's purpose in developing the 2025 Blueprint is to provide a strategy to address many of the challenges faced by the Sacramento region as the population grows. The proposed 2025 Blueprint seeks to guide the Sacramento region toward a more sustainable future through better integration of smart land use decisions with a well-managed transportation system. This analysis examines the following potential growth-inducing impacts related to implementation of the 2025 Blueprint and assesses whether the associated physical effects would be potentially significant and adverse:

1. Foster population growth and construction of housing.
2. Eliminate obstacles to population growth.

3. Foster economic growth.
4. Affect service levels, facility capacity, or infrastructure demand.
5. Encourage or facilitate other activities that could significantly affect the environment.

FOSTER POPULATION GROWTH AND CONSTRUCTION OF HOUSING

As described in Chapter 2, "Project Description," the process for developing the 2025 Blueprint included the preparation of a Development Pattern to accommodate the Regional Growth Projection based on existing zoning and other land use policies and the proposed plan's strategies. Population growth was projected prior to preparation of the 2025 Blueprint and was used as a basis for the housing and employment growth projections of the 2025 Blueprint. By law and by design, the 2025 Blueprint provides a coordinated strategy for managing land use patterns and transportation improvements to accommodate projected population growth.

The 2025 Blueprint is intended to help shape growth patterns in the region, leading to better efficiency, higher sustainability, and more compact and mixed patterns of land use that are better served by transit and other mode choice options. The proposed plan prioritizes designated growth geographies to accommodate the Regional Growth Projection. The 2025 Blueprint uses the community types and land use strategies to influence the location, use, intensity, and density of forecasted development. It would be inaccurate to conclude that the 2025 Blueprint would induce that growth. First, SACOG wields no land use authority in this regard. All land use decisions remain at the local level with the 28 member cities and counties. Second, as required by law, the 2025 Blueprint identifies areas within the region sufficient to house the population of the region; therefore, it is tailored to meet population growth, not to foster the construction of housing that has the potential to induce growth. In this regard, the SACOG planning process differs from the land use planning processes of its member agencies. Local government land use planning may be driven by a vision for a community that is not required to be constrained by specific economic or population forecasts, or by a mandated horizon date.

The 2025 Blueprint represents the coordination of local land use policies with transportation investments that support mixed-use and compact development, transportation options, housing choice and diversity, conservation of agricultural land and natural resources, and use of existing assets. By accommodating efficient, sustainable, compact growth in existing developed areas and limited new areas, and not planning for anything more than nominal or by-right growth in rural areas, regional development pressures are accommodated in a more sustainable pattern, resulting in overall beneficial effects for the region.

Development consistent with the 2025 Blueprint would result in additional commerce, industry, recreation, public services, and infrastructure throughout the region. However, as substantiated by the growth forecasts, this growth is projected to occur under any scenario. By influencing the location and nature of this growth, adverse outcomes would be avoided or minimized, and regional opportunities would be maximized. Therefore, rather than allowing population growth ad hoc through the approval and construction of individual housing and other types of development projects, the plan accommodates and manages that growth.

ELIMINATE OBSTACLES TO POPULATION GROWTH

Impediments to growth may be physical, regulatory, or fiscal. A physical obstacle to growth typically involves the absence or limitation of public infrastructure or insufficient infrastructure service capacity in an area that would otherwise accommodate development. The extension of public service infrastructure (e.g., roadways, water, and sewer lines) into areas that are not currently provided with these services may be considered growth inducing. Similarly, the elimination of a regulatory obstacle, such as a service boundary or growth management policy, or a change in land use designation, can also result in new growth in a manner that might be considered growth inducing. In addition, resolution of infrastructure funding constraints or the identification of new sources of funding can facilitate growth by funding the construction of new infrastructure.

The 2025 Blueprint would result in significant investments and improvements in the regional transportation system in support of planned growth. Transportation improvements can remove impediments to growth by providing access and roadway capacity to new areas for development and, depending on location, create roadway capacity that induces travel. Additionally, because community-serving infrastructure (e.g., roadways, water, and sewer lines) and services often are located within or adjoining road rights-of-way, the construction of roadways can facilitate the expansion and/or extension of infrastructure.

In this case, however, the transportation network is designed to fit to the land use plan. The transportation improvements focus on maintaining the current system, right-sizing and/or value-engineering the expansion of roads, targeting cost-effective expansions of transit, and increasing the commitment to walking and bicycling investments. This is guided by the performance-based objectives of the 2025 Blueprint and by the overall policy objectives of Senate Bill (SB) 375, which collectively seek to, among other things, increase roadway optimization, increase modes of travel other than single occupancy vehicle (SOV) use, increase access to jobs and amenities, reduce vehicle miles traveled (VMT), and reduce greenhouse gas (GHG) emissions. Among the strategies to meet these goals is a mix of land uses balanced to minimize VMT and maximize the ability for residents to conduct everyday activities within their neighborhood without the need to travel by car. In other words, the proposed roadway investments are located and sized to accommodate only the forecasted growth.

The list of transportation projects included in the 2025 Blueprint was developed by SACOG to strike a balance between a transportation network that will efficiently serve the projected regional growth for the plan, manage congestion, provide transportation choice to residents, improve safety, and provide the best path for achieving the policy goals in the 2025 Blueprint and the GHG emissions target. The transportation project list was developed to support the Development Pattern, and includes allocation of funding across major project categories, including maintenance and rehabilitation; road and highway capacity; transit improvements; bike and pedestrian improvements; and programs, safety, system management, and operations.

The 2025 Blueprint does not forecast growth on Lands Not Identified for Development during the planning period, though there is existing development in these areas (primarily farm homes, agricultural-related uses, and public lands). Because growth is not assumed in the 2025 Blueprint for this Community Type, there would be minimal transportation improvements in these areas by 2050. Primarily, these investments would go towards ongoing road maintenance and targeted operational improvements to support safer and more efficient agricultural goods movement. A small number of new or expanded roads are planned; they represent less than 3 percent of the total regional route miles in the 2025 Blueprint. Each of these proposed roadway projects is intended to connect growth areas in Established or Developed Communities and not induce growth in Lands Not Identified for Development. Most of these projects are along the rural/urban edge of the 2025 Blueprint and nearly all are expansions within an existing right-of-way.

The policies in the 2025 Blueprint encourage more efficient use of the regional transportation system. More efficient utilization of roadways demonstrated in the 2025 Blueprint indicates that projects are right sized to match travel demand, without creating excess roadway capacity that increases VMT and induces growth. Moreover, the 2025 Blueprint would result in increasing transit productivity, increasing bicycling and walking mode shares, decreasing auto mode share, and decreasing VMT per capita. This substantiates the conclusion that the strategic roadway expansions in the 2025 Blueprint, in combination with other modal investments, would support more compact, sustainable, and efficient development without inducing the type of population growth that would require development of more land for urban purposes.

As established above, by law and policy this transportation system investment is integrally linked to, and balanced with, the housing and employment needed to accommodate the projected population of the region. In other words, rather than eliminating obstacles to growth, the 2025 Blueprint would accommodate growth that is outside the regulatory control of SACOG.

FOSTER ECONOMIC GROWTH

As discussed above, the 2025 Blueprint was developed to respond to forecasted population increases, employment opportunities, and housing needs within the region. Therefore, the 2025 Blueprint is designed to accommodate growth that would occur with or without the 2025 Blueprint; it is not designed, nor is it anticipated to, drive further population growth beyond the levels forecasted. The 2025 Blueprint would support the successful economic growth and prosperity of the region as required by law. Federal regulations governing the preparation of regional transportation plans require that they "support the economic vitality of the metropolitan area" (23 Code of Federal Regulations [CFR] Section 450.306). Moreover, economic growth is critical for the success of the region. But the population growth resulting from that economic growth and vitality is accommodated by the 2025 Blueprint—it is not a growth-inducing byproduct of the 2025 Blueprint.

AFFECT SERVICE LEVELS, FACILITY CAPACITY, OR INFRASTRUCTURE DEMAND

While growth that may occur consistent with the 2025 Blueprint could result in increases in demand for public services and infrastructure in excess of existing conditions, SACOG's member agencies retain the authority to ensure the provision of appropriately timed and sized services and utilities to serve new urban development concurrent with growth. Sections 3.13, "Public Services," 3.14, "Recreation," and 3.18, "Utilities and Service Systems," address the potential impacts of providing these public services and utilities.

ENCOURAGE OR FACILITATE OTHER ACTIVITIES THAT COULD SIGNIFICANTLY AFFECT THE ENVIRONMENT

This Draft EIR provides a comprehensive assessment of the potential environmental impacts associated with implementation of the 2025 Blueprint. See Sections 3.1 through 3.19, which comprehensively address the potential for impacts from the projected land use pattern and planned transportation improvements resulting from implementation of the 2025 Blueprint.

SUMMARY

In summary, the 2025 Blueprint would accommodate growth in a manner substantially consistent with local general plans, regional values and visions, and state and federal laws. The 2025 Blueprint would account for growth likely to occur during the 30-year planning horizon (2020 to 2050) and makes assumptions about location and design that promote regional environmental benefits. While growth inducement can be considered an adverse impact under CEQA, the 2025 Blueprint is growth accommodating not inducing, and would reduce environmental effects related to growth. Therefore, the potential for adverse impact is considered less than significant, and additional mitigation measures beyond those identified in Sections 3.1 through 3.19 are not necessary.

5.2 SIGNIFICANT AND UNAVOIDABLE ADVERSE IMPACTS

This Draft EIR has been prepared pursuant to the CEQA (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 1500, et seq.) to evaluate the physical environmental effects of the 2025 Blueprint. As required by Section 15126.2(c) of the State CEQA Guidelines, this Draft EIR includes a description of the significant environmental effects of the 2025 Blueprint that cannot be avoided if the plan is adopted and implemented. This Draft EIR describes all significant impacts, including those that can be mitigated but not to a level of insignificance because the specifics of the potential impact cannot be known at this time or due to the limits of SACOG's jurisdiction.

The significant and unavoidable impacts identified in this Draft EIR may be: (1) less than significant after mitigation but identified as significant and unavoidable because SACOG cannot compel agencies to implement mitigation, (2) assumed significant and unavoidable because of uncertainty in the project-specific impacts, or (3) significant and

unavoidable after mitigation is implemented or because no feasible mitigation can be identified. The following lists impacts that are within the latter two categories identified above (i.e., the level of specific impacts associated with individual project is uncertain and implementation of identified mitigation measures would not reduce the impact to a less-than-significant level). All impacts are identified in Table ES-1.

- Aesthetics: Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and Its Surroundings in Non Urbanized Areas
- Agricultural and Forestry Resources: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to Non-Agricultural Use; Conflict with Existing Zoning or General Plan Land Use Designations for Agricultural Use, or with a Williamson Act Contract; Conflict with Existing Zoning or Land Use Designation for, or Cause Rezoning of, Forest Land, Timberland, or Timberland Zoned Timberland Production; Result in the Loss of Forest Land or Conversion of Forest Land to Non-Forest Use; Involve Other Changes in the Existing Environment that could Result in Conversion of Farmland to Non-Agricultural
- Air Quality: Be Inconsistent with Or Exceed Applicable Thresholds of Significance Established by The Local Air District for Long-Term Operational Criteria Air Pollutant Emissions and Short-Term Construction Criteria Air Pollutant Emissions; Expose Sensitive Receptors to Substantial TAC Concentrations, Including Those from Construction and Operational Emissions
- Cultural Resources: Cause a Substantial Adverse Change in the Significance of a Historical Resource; Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources
- Greenhouse Gas Emissions and Energy: Be inconsistent with the State's ability to achieve the 2030 reduction target of SB 32 and carbon neutrality by 2045, consistent with AB 1279; Increase GHG Emissions from Project Construction Activities Resulting from the 2025 Blueprint in a Manner Inconsistent with Achievement of the State's Climate Goals
- Noise: Result in Temporary Noise Levels in the Vicinity of the Project that Exceed FTA Recommended Standards or Generate a Substantial Temporary Increase in Ambient Noise Levels
- Public Services: Result in Substantial Adverse Physical Environmental Impacts Associated with the Provision of New or Physically Altered Governmental Facilities in order to Maintain Acceptable Service Ratios, Response Times or Other Performance Objectives for Fire Protection, Police Protection, Schools, Libraries, Social Services, and/or Other Public Services
- Recreation: Increase the Use of Existing Neighborhood and Regional Parks or Other Recreational Facilities such that Substantial Physical Deterioration of the Facility Could Occur or be Accelerated
- Transportation: Result in a Change in per Capita VMT that is Inconsistent with CARB's 2022 Scoping Plan
- Tribal Cultural Resources: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource
- Utilities and Service Systems: Have Insufficient Water Supplies Available to Serve the Project and Reasonably Foreseeable Future Development During Normal, Dry and Multiple Dry Years; Require or Result in the Relocation or Construction of New or Expanded Water, Wastewater, Treatment or Storm Water Drainage, Electric Power, Natural Gas, or Telecommunications Facilities, the Construction or Relocation of Which Could Cause Significant Environmental Effects
- Wildfire: Exacerbate Wildfire Risks, Thereby Exposing People or Structures to a Significant Risk of Loss, Injury, or Death, or Exposing Project Occupants to Pollutant Concentrations or People or Structures to Significant Risk of Downslope or Downstream Flooding or Landslides as a Result of Post-fire Slope Instability.

5.3 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

The State CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the project. Specifically, the State CEQA Guidelines section 15126.2(c) states:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generation to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The 2025 Blueprint would result in the irreversible and irretrievable commitment of energy and material resources from three perspectives, each of which is discussed briefly below:

1. Use of nonrenewable resources that would commit future generations.
2. Irreversible damage from environmental accidents.
3. Irretrievable commitments of nonrenewable resources to justify current consumption.

5.3.2 Use of Nonrenewable Resources That Would Commit Future Generations

The region has multiple nonrenewable resources including agricultural lands, open space, habitat areas, and mineral resources areas that contain aggregates and natural gas. Increased levels of development outside of already developed areas could result in permanent loss or other adverse impacts to these resource areas. In addition, increased levels of development throughout the region could result in greater use of nonrenewable resources during construction, including nonrenewable aggregates, or increased use of glass, plastic, and other petroleum products.

Though not entirely irreversible, land use growth and growth patterns that would result from implementation of the 2025 Blueprint would likely commit future generations to those uses. Once established, land use patterns can be difficult to change and/or significantly influence without considerable political, social, and economic cost. The Development Pattern reflected on the 2025 Blueprint represents a commitment of these areas to urban uses for the foreseeable future. Land use and development consistent with the 2025 Blueprint would result in irreversible changes by increasing densities and introducing development onto infill sites. This would be considered a beneficial outcome because it improves the efficiency of land utilization in existing developed areas.

For the purposes of this analysis, it is important to evaluate the 2025 Blueprint in the context of resource commitments that would occur absent the plan. As compared to future conditions, implementation of the 2025 Blueprint would result in an improved and more efficient land use pattern, with more growth concentrated on less land and closer to existing infrastructure. The result would be better utilization of already developed land and better utilization of new land in Developing Communities. Per-capita use of other nonrenewable resources decreases under the 2025 Blueprint. These include lower per-capita use of energy and fuels; less conversion of agricultural, open space, and habitat lands; and lower per-capita emissions of GHGs associated with reduced per-capita VMT. While use of nonrenewable energy and fuel; conversion of agriculture, open space, and habitat; release of pollutant emissions into the atmosphere; and climate change effects are in and of themselves generally irreversible resource commitments, the fact that the 2025 Blueprint would change (slow) these rates is a beneficial outcome of the 2025 Blueprint because it would increase opportunities and options for the future. Overall, implementation of the 2025 Blueprint would commit existing and future generations to a more efficient use of nonrenewable resources than under existing or presently planned conditions.

5.3.3 Irreversible Damage from Environmental Accidents

Any growth in the region includes the potential for irreversible damage from environmental accidents. For example, greater densities expose more people in the same area to unexpected environmental events such as fire, flood, and/or earthquake. Also, urban environments generally experience higher levels of noise, higher pollutant emissions, more vehicles, and increased people-to-people interactions. In addition, irreversible changes to the physical

environment could occur from the accidental release of hazardous materials associated with transport on roadways and/or from some development activities such as certain industrial processes.

However, this exposure would exist under any growth scenario. Federal and state regulations require the 2025 Blueprint to accommodate expected growth in the region based on market-based forecasts. The 2025 Blueprint would minimize the footprint of that growth. Implementation of the 2025 Blueprint would not, in and of itself, result in greater potential for irreversible damage from an environmental accident. For further discussion, see Section 3.8, "Hazards and Hazardous Materials."

5.3.4 Irretrievable Commitments of Nonrenewable Resources to Justify Current Consumption

By 2050, the plan area of the 2025 Blueprint is projected to increase by approximately 580,000 people, 260,000 jobs, and 278,000 homes (see Section 2.6.1, "Development Pattern"). Implementation of the 2025 Blueprint would convert approximately 30,233 acres of undeveloped land, which represents a 1 percent increase in the amount of developed land over existing conditions (see Table 2-1, "Summary of Expected Developed Acres by County," in Chapter 2) and would result in more compact development than existing conditions. By increasing the density of development, and decreasing the footprint of growth, pressures to convert agricultural and open space lands outside areas planned for growth would be decreased.

New growth generally results in additional demand for electricity, natural gas, and propane supplies and distribution. However, the 2025 Blueprint, and other federal and state efforts, would result in lower per-capita demand by encouraging higher density infill development; encouraging energy conservation in new construction and existing buildings; and reducing the infrastructure energy demands by encouraging alternative transportation such as bicycling, walking, and public transit. Furthermore, the 2025 Blueprint would result in lower per-capita VMT through the horizon year (2050). For further discussion, see Section 3.7, "Greenhouse Gas Emissions and Energy," and Section 3.16, "Transportation."

5.3.5 Summary

Any growth in the region will result in significant irreversible resource commitments. In evaluating the significance of a project's irreversible resource commitments, CEQA requires a lead agency to consider whether such commitments are "justified" (State CEQA Guidelines Section 15126.2[c]). As discussed above, and consistent with the project objectives for the 2025 Blueprint, the 2025 Blueprint is designed to minimize irreversible resource commitments, thus maximizing opportunities for future generations. While the 2025 Blueprint would result in irreversible resource commitments, by encouraging higher density, less-consumptive development, as compared to the environmental baseline and forecasted conditions, the commitments are justified and beneficial. Therefore, these commitments are considered a less-than-significant impact under CEQA.

5.4 CUMULATIVE IMPACTS

5.4.1 Introduction to the Cumulative Analysis

This Draft EIR provides an analysis of cumulative impacts of the 2025 Blueprint taken together with other past, present, and probable future projects producing related impacts, as required by Section 15130 of the State CEQA Guidelines. The goal of such an exercise is twofold: first, to determine whether the overall long-term impacts of all such projects would be cumulatively significant; and second, to determine whether the incremental contribution to any such cumulatively significant impacts by the project would be "cumulatively considerable" (and thus significant). (See State CEQA Guidelines Sections 15130[a]–[b], Section 15355[b], Section 15064[h], and Section 15065[c]; and Communities for a Better Environment v. California Resources Agency [2002] 103 Cal. App. 4th 98, 120.) In other

words, the required analysis intends first to create a broad context in which to assess cumulative impacts, viewed on a geographic scale beyond the plan area itself, and then to determine whether the project's incremental contribution to any significant cumulative impacts from all projects is itself significant (i.e., "cumulatively considerable").

Cumulative impacts are defined in State CEQA Guidelines Section 15355 as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." A cumulative impact occurs from "the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (State CEQA Guidelines Section 15355[b]).

Consistent with State CEQA Guidelines Section 15130, the discussion of cumulative impacts in this Draft EIR focuses on significant and potentially significant cumulative impacts. Section 15130(b) of the State CEQA Guidelines provides, in part, the following:

> [t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

A proposed project is considered to have a significant cumulative effect if:

- the cumulative effects of development without the project are not significant and the project's additional impact is substantial enough, when added to the cumulative effects, to result in a significant impact; or
- the cumulative effects of development without the project are already significant and the project contributes measurably to the effect.

The term "measurably" is subject to interpretation. The standards used herein to determine measurability are that the impact must be noticeable to a reasonable person, or must exceed an established threshold of significance (defined throughout the resource sections in Chapter 3 of this Draft EIR).

5.4.2 Methodology

The 2025 Blueprint is a "cumulative plan" by definition. It is a transportation and land use plan for an entire region of the state that shares, or is connected by, common economic, social, and environmental characteristics. The SACOG region encompasses approximately 6,000 square miles and includes six counties and 22 cities. The Regional Growth Projection in the 2025 Blueprint indicate that the 2020 population within the six counties, excluding the Tahoe Basin, was 2,540,353, representing an approximately 15 percent increase since 2008 (2,215,044). This is much higher than the growth rate of the state of California, which grew about 8 percent over the same period to a population of 39,538,223 in 2020. As of 2020, the plan area was home to about 6 percent of the population in California (California Department of Finance 2024). As such, the environmental analysis of the 2025 Blueprint is a cumulative analysis compliant with the requirements of CEQA and the State CEQA Guidelines. Nevertheless, the following discussion examines impacts associated with implementation of the 2025 Blueprint, plus implementation of planned growth for jurisdictions adjoining the SACOG region, to assess the potential for cumulative impacts from growth extending beyond SACOG's jurisdictional boundaries.

When evaluating cumulative impacts, CEQA allows the use of either a list of past, present, and probable future projects, including projects outside the control of the lead agency, or a summary of projections in an adopted planning document, or a thoughtful combination of the two approaches. The cumulative analysis presented below uses a projections-based approach. Land use and growth projections for the SACOG region, which are the subject of analysis throughout this Draft EIR, are combined with the growth projections for the Metropolitan Planning Organizations (MPOs) that adjoin the SACOG region. In other words, the geographic scope for the subject cumulative analysis covers the entire SACOG region plus the projected growth within MPO regions that adjoin the SACOG

regional boundary, including the Butte County Association of Governments (BCAG), Association of Bay Area Governments (ABAG), San Joaquin Council of Governments (SJCOG), and Tahoe Metropolitan Planning Organization (TMPO). These are described below.

BUTTE COUNTY ASSOCIATION OF GOVERNMENTS

BCAG encompasses approximately 1,665 square miles in north central California and is comprised of Butte County and the cities of Biggs, Gridley, Oroville, and Chico and the Town of Paradise. BCAG adopted its most recent RTP/SCS in December 2024 (BCAG 2024). BCAG's priorities for the *Butte County 2024 RTP/SCS* are to maintain and fund safety and operational improvements for the state highway and local roadway systems; support regional and local active transportation and public transit projects; and develop the North Valley Rail project. As identified in the *Butte County 2024 RTP/SCS*, the 2022 population in the region was 201,608 and is projected to be 260,707 in 2045 (a growth rate of 29 percent) (BCAG 2024). The number of housing units in the region is projected to increase from 91,549 units in 2022 to 118,548 units in 2045 (an increase of 29 percent). The number of jobs is projected to increase from 77,000 in 2022 to 97,209 in 2045 (an increase of 26 percent).

ASSOCIATION OF BAY AREA GOVERNMENTS

ABAG is comprised of the nine Bay Area counties—Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma counties—and 101 cities and towns. *Plan Bay Area 2050* was adopted by the Metropolitan Transportation Commission (MTC) and ABAG in October 2021 to fulfill the federal requirements to prepare and RTP and state requirements to prepare an SCS. *Plan Bay Area 2050+* is currently being prepared and is a limited and focused update that builds on *Plan Bay Area 2050*. *Plan Bay Area 2050+* includes strategy refinements informed by *Plan Bay Area 2050* implementation and it retains and builds on the 11 themes and 35 strategies included in the current long-range plan. *Plan Bay Area 2050+* also reflects updated forecasts and assumptions to reflect current planning conditions. While the plan is still being developed, multiple documents have been prepared during the planning phase, including a Final Regional Growth Forecast (MTC and ABAG 2025), that will guide development of *Plan Bay Area 2050+*. As identified in the Final Regional Growth Forecast, the 2020 population in the nine Bay Area counties was 7,749,000 and is projected to be 9,586,000 in 2050 (a growth rate of 24 percent) (MTC and ABAG 2025). The number of households is projected to increase from 2,798,000 in 2020 to 3,796,000 in 2050 (an increase of 36 percent). The number of housing units is projected to increase from 2,875,000 units in 2020 to 3,996,000 units in 2050 (an increase of 39 percent). Finally, the number of jobs is projected to increase from 4,025,000 in 2020 to 5,436,000 in 2050 (an increase of 35 percent).

SAN JOAQUIN COUNCIL OF GOVERNMENTS

SJCOG encompasses approximately 912,600 acres and is comprised of San Joaquin County and the cities of Stockton, Lodi, Manteca, Mountain House, Tracy, Ripon, Escalon, and Lathrop. SJCOG adopted its most recent RTP/SCS in August 2022 (SJCOG 2022). The *2022 RTP/SCS* identifies policies and supportive strategies to guide the region's future transportation system from 2022 through 2046. San Joaquin County remains one of the fastest-growing regions in California. As identified in the *2022 RTP/SCS*, the 2020 population in the region was 773,581 and is projected to be 1,022,228 in 2050 (a growth rate of 32 percent) (SJCOG 2022). Housing growth in San Joaquin County has been historically influenced by the county's proximity to the San Francisco Bay Area and the relatively cheaper housing costs on this side of the Altamont Pass. The number of housing units in the region is projected to increase from 239,184 units in 2020 to 313,224 units in 2050 (an increase of 31 percent). The County's economy continues to recover from the COVID-19 pandemic and the number of employees is projected to increase from 330,918 in 2020 to 427,389 in 2050 (an increase of 29 percent).

TAHOE METROPOLITAN PLANNING ORGANIZATION

The Tahoe Regional Planning Agency (TRPA) is the Tahoe Region's federally designated metropolitan planning organization and the bi-state compact agency that California and Nevada created 50 years ago to manage growth, development, and land use in the Tahoe watershed. The region is comprised of El Dorado, Douglas, Placer, and Washoe counties and the cities of Carson City and South Lake Tahoe. TRPA adopted the *2020 Regional Transportation Plan* in April 2021 (TRPA 2021). As identified in the *2020 Regional Transportation Plan*, the 2018 population in the region was 51,624 and is projected to be 58,041 in 2045 (a growth rate of 12 percent), due to the projected increase in regional housing units and increased residential occupancy rate (TRPA 2021). The number of housing units in the region is influenced by market conditions as well as TRPA's development rights system, which caps the total development potential for the region. The number of housing units (which includes those occupied by full-time residents and those not occupied by full-time residents) in the region is projected to increase from 47,655 units in 2018 to 52,252 units in 2045 (an increase of 10 percent). Finally, a small increase in employment is projected in the region as a result of increased visitation, construction of commercial development and tourist accommodation units, and population growth. The number of employees is projected to increase from 28,604 in 2018 to 29,462 in 2045 (an increase of 3 percent).

SUMMARY

The combination of the SACOG, BCAG, ABAG, SJCOG, and TMPO regions is referred to in this analysis as the "cumulative impact analysis area." As described above, the population for the cumulative impact analysis area is projected to grow from 11.3 million people in 2020 to 14 million people by 2050.

The SACOG region comprises 22 percent of the existing population, 22 percent of the existing number of housing units, and 19 percent of the existing number of employees in the cumulative impact analysis area. By 2050, this proportion is expected to be generally the same. This demonstrates that under both current and forecasted future conditions, the SACOG region represents a substantial portion of the growth in the cumulative analysis impact area. The implications for this analysis are that the contributions of the region are, and will continue over time to be, a large proportion of the activity in many environmental impact categories. This general assumption is reflected in the analysis below.

5.4.3 Analysis of Cumulative Impacts

The following sections contain a discussion of the cumulative effects anticipated from implementation of the 2025 Blueprint, together with related projects and planned development in the cumulative impact analysis area, for each of the environmental issue areas evaluated in this Draft EIR. The analysis conforms with Section 15130(b) of the State CEQA Guidelines, which specifies that the "discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact."

For purposes of this Draft EIR, the project would result in a significant cumulative effect if:

- the cumulative effects of growth forecast in the cumulative impact analysis area are not significant and the incremental impact of implementing the 2025 Blueprint is substantial enough, when added to the cumulative effects of related projects, to result in a new cumulatively significant impact; or
- the cumulative effects of growth forecast in the cumulative impact analysis area are already significant and implementation of the 2025 Blueprint makes a considerable contribution to the effect.

The standards used herein to determine a considerable contribution are that either the impact must be substantial or must exceed an established threshold of significance.

AESTHETICS

Cumulative Aesthetic Impacts in the Form of Night Sky Lighting and Cumulative Changes in the Visual Environment

Many of the aesthetic resources experienced in the cumulative impact analysis area are similar to those experienced regionally in the plan area of the 2025 Blueprint: agricultural lands and open space, skylines and mountain views, historic downtowns and landmarks, forests and habitat areas, parks and recreation areas, and rivers and waterways. As stated above, the SACOG region makes up a significant portion of the cumulative analysis impact area. Previous growth and development trends have resulted in impacts in the form of night sky lighting and changes to the visual environment. These impacts indicate an adverse cumulative condition with regard to aesthetic and visual resources in the cumulative impact analysis area.

Some types of impacts to aesthetic resources are localized and not cumulative in nature. For example, the creation of light, glare, or shadows at one location is not worsened by light, glare, or shadows created at another location. Rather these effects are independent, and the determination as to whether they are adverse is specific to the characteristics of the project and location of the site where they would occur. Projects that block a view or affect the visual quality of a site also result in localized impacts. The impact occurs specific to a site or area and remains independent from another project elsewhere that may block a view or degrade the visual environment of a specific site.

There are two types of aesthetic impact that may be additive in nature and thus cumulative, night sky lighting and overall changes in the visual environment as the result of increasing urbanization of large areas. As development in one area, such as a regional urban center like downtown Sacramento, increases and possibly expands over time and meets or connects with development in an adjoining ex-urban area, the effect of night sky lighting experienced outside of the region may increase in the form of larger and/or more intense nighttime glow in the viewshed. Although growth in the 2025 Blueprint is primarily focused on Center and Corridor Communities and Established Communities, development outside of those geographies with long-distance views, may result in nighttime lighting becoming more visible, covering a larger area, and/or appearing in new areas as a result of projected development under the 2025 Blueprint.

With regard to the visual environment experienced throughout the cumulative impact analysis area, as planned cumulative development occurs over time the overall visual environmental would change. Whether this overall change in land use is experienced as an adverse or beneficial outcome is highly subjective. However, the combination of forecasted development in the SACOG region and planned development in neighboring counties would result in a different visual environment than currently exists. For the purposes of this analysis, the cumulative impacts associated with night sky lighting and changes in the visual environment are considered potentially significant and the contribution of the 2025 Blueprint to these impacts may be cumulatively considerable.

Mitigation Measures

Implement Mitigation Measure 3.1-1: Protect Public Views of Important Scenic Vistas, Scenic Resources Along State Scenic Highways, and Visual Character and Quality

Implement Mitigation Measure 3.1-2: Design River crossings to Minimize Aesthetic and Visual Impacts to the Greatest Feasible Extent

Implement Mitigation Measure 3.1-3: Design Projects to be Visually Compatible with Surrounding Areas

Implement Mitigation Measure 3.1-6: Design Structures to Avoid or Reduce Impacts Resulting from Nighttime Light and Glare

Significance after Mitigation

Implementation of Mitigation Measures 3.1-1 through 3.1-3 and Mitigation Measure 3.1-6 would minimize the potential aesthetic impacts associated with the implementation of the 2025 Blueprint and would, therefore, minimize the contribution of the 2025 Blueprint to cumulative aesthetic impacts. If the implementing agencies adopt these mitigation measures, it would reduce the contribution of the 2025 Blueprint to cumulative impacts on the visual environment to less than significant. However, SACOG cannot require implementing agencies to adopt these mitigation measures, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, the regional contribution to this cumulative impact is potentially **significant and unavoidable.**

AGRICULTURE AND FORESTRY RESOURCES

Cumulative Loss of Agricultural and Forest Land

Implementation of projects and development in the cumulative analysis impact area has resulted in a significant cumulative impact related to agricultural resources including the conversion of agricultural and forest land. Therefore, there is an existing significant cumulative condition regarding the loss of agricultural and forest land in the cumulative impact analysis area.

Based on data in the state's Farmland Mapping and Monitoring Program, implementation of the 2025 Blueprint would result in conversion of approximately 2,752 acres of prime, unique, and statewide important farmland to urban use. Based on local zoning, approximately 4,402 acres of land zoned for agricultural use would be lost.[1] Development within neighboring regions would also continue to convert agricultural land outside of the SACOG region. Collectively this would add to the overall conversion of agricultural lands in the cumulative impact analysis area. As such, the 2025 Blueprint's contribution to the significant agricultural cumulative impact would be cumulatively considerable.

Implementation of the 2025 Blueprint would result in the conversion of 2,716 acres of forest land as defined by the California Forest Legacy Act. Development within neighboring regions could also convert forest resources and forest lands, which would add to the overall conversion of forestry resources and forest lands in the cumulative context. As such, the 2025 Blueprint would result in a cumulatively considerable contribution to the significant cumulative impact related to the loss of forestry resources and forest lands.

Mitigation Measures

Implement Mitigation Measure 3.2-1: Provide for Permanent Protection of Farmland

Implement Mitigation Measure 3.2-2: Provide for Permanent Protection of Forest Land and Timberland

Implement Mitigation Measure 3.2-3: Minimize Indirect Conversion of Farmland to Non-Agricultural Use

Implement Mitigation Measure 3.2-4: Manage Growth at the Rural-Urban Interface to Support the Long-Term Viability of Agriculture

Significance after Mitigation

If the implementing agencies adopt Mitigation Measures 3.2-1 through 3.2-5, impacts associated with the loss of agricultural and forest lands would be reduced because projects would be required to provide permanent protection for farmland, would be designed to avoid or minimize conflicts with lands protected by agricultural zoning or Williamson Act contracts and minimize the indirect conversion of farmland, would be designed to provide permanent protection of forest land and timberland, and would adopt measures to manage urban growth near the rural-urban interface to limit the further loss of agricultural lands. Implementation of Mitigation Measures 3.2-1 through 3.2-5 would reduce the contribution of the 2025 Blueprint to cumulative impacts on agriculture and forest resources but not to a less-than-significant level. Additionally, SACOG cannot require implementing agencies to adopt these

[1] There is an unknown overlap between these acreage totals, they are not additive.

mitigation measures, and it is ultimately the responsibility of the implementing agency to determine and adopt mitigation. Therefore, the contribution of the 2025 Blueprint to this cumulative impact remains **significant and unavoidable** for purposes of this program-level review.

AIR QUALITY

Cumulative Impacts to Air Quality

California is divided geographically into 15 air basins for the purpose of managing the air resources of the state on a regional basis. An air basin generally has similar meteorological and geographic conditions throughout. The SACOG region falls primarily within the Sacramento Valley Air Basin with a portion within the Mountain Counties Air Basin. Adjoining air basins within the cumulative analysis impact area include the following:

- Great Basin Valleys,
- Mountain Counties,
- Sacramento Valley,
- San Francisco Bay Area,
- Lake Tahoe,
- Lake County, and
- San Joaquin.

In each of these air basins, CARB has identified criteria air pollutants for which emissions levels have exceeded applicable federal and state pollutant standards. These pollutants are identified as "nonattainment" for the basin. Growth in the cumulative impact analysis area would exacerbate the nonattainment status of these basins by adding criteria pollutants emitted from various planned land uses. Growth within a specific region can exacerbate pollution levels within the air basin in which it lies but it can also potentially exacerbate pollution levels within neighboring air basins when pollutant "transport" occurs. Pollutant transport is a result of a variety of topographical and atmospheric conditions that cause pollution generated in one location to be moved (transported) to another location outside of the air basin in which it originated.

As stated in the analysis above, implementation of the 2025 Blueprint would result in significant and unavoidable impacts related to construction- and operations-related criteria pollutant emissions air district thresholds, exposure of sensitive receptors to substantial concentrations of TACs, and exposure of a substantial number of people to odors. Because air quality is inherently cumulative, the significant impacts identified above would result in a considerable contribution to a cumulative impact related to air quality. This impact would be significant.

Mitigation Measures

Implement Mitigation Measure 3.16-1: Implement VMT Reduction Strategies

Implement Mitigation Measure 3.3-1: Require Applicable Design Measures

Implement Mitigation Measure 3.3-2: Require Applicable Construction Measures

Implement Mitigation Measure 3.3-3: Conduct a Site-Specific Health Risk Assessment

Implement Mitigation Measure 3.3-4: Implement the Strategies Contained in the CARB Technical Advisory

Implement Mitigation Measure 3.3-5: Require Construction Health Risk Assessment

Implement Mitigation Measure 3.3-6: Require Applicable Local Air District Measures and Best Practices Related to Odors

Significance After Mitigation

Mitigation Measure 3.3-1 provides multiple methods to reduce operational emissions. These methods include reducing mobile-source emissions by improving the accessibility and feasibility of alternative transportation such as walking, biking, and public transit to reduce single-passenger vehicle trips and reducing emissions from the generation of energy used for building utilities through high-efficiency lighting, low-NO_x water heaters, rooftop solar panels, and energy efficient windows. Mitigation Measure 3.3-2 also provides multiple emissions reduction methods, specifically focused on reducing construction-related pollutants. These methods include reducing dust emissions by limiting vehicle speeds on unpaved surfaces and prohibiting grading activities in high-winds, and by reducing emissions from the combustion of fuels used in vehicles and equipment by means of limiting engine idling times and ensuring proper maintenance of equipment to ensure operational efficiency.

Mitigation Measure 3.3-3 would reduce the exposure of sensitive receptors to substantial TAC concentrations through the use of air filtering systems, orientation of HVAC air intakes, tiered tree and vegetation planting, and decreased stop-and-go traffic and idling. The vehicle speed reduction measures listed under Mitigation Measure 3.3-4 would result in reduced stop-and-go driving and hard accelerations thereby reducing emissions rates. Mitigation Measure 3.3-5 would require that construction HRAs are prepared at the project-level for all construction projects anticipated to last more than 6 months and located within 1,000 feet of sensitive receptors (as defined by SMAQMD) regardless of intensity of construction. This would reduce TAC exposure by identifying potential TAC-related impacts at the project level and implementing project-level mitigation measures to reduce impacts. Lastly, Mitigation Measure 3.3-6 would reduce impacts by requiring implementing agencies to determine whether sensitive receptors would be exposed to objectionable odors and apply recommended applicable mitigation measures as defined by the applicable local air district and best practices.

If the implementing agency adopts these mitigation measures, it would reduce the contribution of the 2025 Blueprint to cumulative impacts on air quality. However, the mitigation measures may not be sufficient to reduce impacts to less than significant levels in all cases. For projects proposing to streamline environmental review, lead agencies must conduct project-level analysis for each project to analyze whether, based on substantial evidence in the record, the proposed mitigation will reduce the impact to less than significant. Additionally, SACOG cannot require implementing agencies to adopt these mitigation measures, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, the regional contribution to this cumulative impact remains significant and unavoidable for purposes of this program-level review.

Implementation of mitigation measures identified in the analysis above would minimize the contribution of the 2025 Blueprint to cumulative air quality impacts but would not reduce them to less-than-significant levels. Consequently, cumulative impacts to air quality, and the regional contribution to them, remain **significant and unavoidable**.

BIOLOGICAL RESOURCES

Cumulative Impacts on Biological Resources

Implementation of projects and development in the cumulative analysis impact area has resulted in a significant cumulative impact to biological resources including degradation and loss of habitat, decline of special-status and common species, degradation and loss of sensitive natural communities, and disruption of wildlife movement or dispersal corridors. Therefore, there is an existing significant cumulative condition regarding loss and degradation of biological resources in the cumulative impact analysis area.

The amount of habitat, consisting of wildland, aquatic, and agricultural communities, for special-status species and other important natural communities (including riparian habitat, oak woodlands, and wetlands) that would be damaged or lost as a result of development in the SACOG region through 2050 is 35,837 acres. While this represents total acres of special-status species and important natural communities habitat lost at the regional level due to implementation of the 2025 Blueprint, adjoining regions within the cumulative impact analysis area may also convert habitat land for development outside of the SACOG region. Implementation of the 2025 Blueprint and cumulative development would also result in disruption of movement corridors and nursery sites. Actions within neighboring

regions may further impact biological resources. Collectively, this adds to the overall impacts on biological resources in the cumulative impact analysis area.

Projected growth within the cumulative impact analysis area will result in significant cumulative impacts on biological resources. Although individual impacts may be reduced to less-than-significant levels with implementation of mitigation measures by implementing agencies, the overall contribution of the new development and transportation infrastructure identified under the 2025 Blueprint to these cumulative impacts on biological resources would be considerable.

Mitigation Measures

Implement Mitigation Measure 3.4-1: Conduct a Biological Resources Assessment

Implement Mitigation Measure 3.4-2: Identify Special-Status Plant Species, and Avoid, Minimize, and Mitigate Impacts

Implement Mitigation Measure 3.4-3: Identify Special-Status Wildlife and Avoid, Minimize, and Mitigate Impacts

Implement Mitigation Measure 3.4-4: Avoid, Minimize, and Mitigate Impacts on Riparian Habitat, Sensitive Natural Communities, and Other Sensitive Habitats

Implement Mitigation Measure 3.4-5: Avoid, Minimize, and Mitigate Impacts on Wetland and Other Waters

Implement Mitigation Measure 3.4-6: Avoid, Minimize, and Mitigate Impacts on Wildlife Movement Corridors or Native Wildlife Nursery Sites

Implement Mitigation Measure 3.4-7: Avoid, Minimize, and Mitigate for Impacts on Protected Trees and Other Biological Resources Protected by Local Ordinances

Significance after Mitigation

Implementation of Mitigation Measures 3.4-1 through 3.4-7 would minimize the contribution of the 2025 Blueprint to cumulative impacts on biological resources in the region, but would not reduce the cumulative contribution to less-than-significant levels. Additionally, SACOG cannot require implementing agencies to adopt these mitigation measures, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Consequently, cumulative impacts on biological resources, and the regional contribution to them, would be **significant and unavoidable**.

CULTURAL RESOURCES

Cumulative Impacts on Cultural Resources

Because all significant cultural resources are unique and nonrenewable members of finite classes, meaning there are a limited number of significant cultural resources, all adverse effects erode a dwindling resource base. The loss of any one archaeological site could affect the scientific value of others in a region because these resources are best understood in the context of the entirety of the cultural system of which they are a part. The cultural system is represented archaeologically by the total inventory of all sites and other cultural remains in the cumulative analysis impact area. As a result, a meaningful approach to preserving and managing cultural resources must focus on the likely distribution of cultural resources, rather than on a single project or parcel boundary.

Common patterns of historic era settlement have occurred over roughly the past two centuries. Many of the buildings, structures, and other built environment features, constructed during the early days of European settlement are no longer present, have been substantially altered or converted to other uses, or have not yet been identified as a

historical resource. Therefore, the cumulative loss of historical resources in the cumulative analysis impact area is considered significant.

The 2025 Blueprint, in combination with other development in the cumulative analysis impact area, could contribute to ongoing substantial adverse changes in the significance of historical resources and unique archaeological resources resulting from urban development and conversion of natural lands. Therefore, the 2025 Blueprint could result in a considerable contribution to a cumulative impact related to cultural resources. This impact would be significant.

Mitigation Measures

Implement Mitigation Measure 3.5-1: Conduct Project-Specific Historic Built Environment Resource Studies and Identify and Implement Project-Specific Mitigation

Implement Mitigation Measure 3.5-2: Conduct Project-Specific Archaeological Resource Studies and Identify and Implement Project-Specific Mitigation

Implement Mitigation Measure 3.5-3: Reduce Visibility or Accessibility of Archaeological Resources

Significance after Mitigation

Mitigation Measure 3.5-1 requires actions to record, evaluate, avoid, or otherwise treat historic resources appropriately, in accordance with pertinent laws and regulations. However, State CEQA Guidelines Section 15126.4(b)(2) notes that in some circumstances, documentation of a historical resource will not fully mitigate the impact of demolition of that resource because the historic resource would no longer exist. Therefore, a substantial adverse change in the significance of a historic resource may not be fully mitigated and it is not possible to know at this level of analysis whether this would occur.

Mitigation Measures 3.5-2 and 3.5-3 would reduce impacts on known and unknown archaeological resources because they would protect in place, recover information, record, or otherwise treat the discovered resource appropriately, and require construction monitoring of known unique archaeological resources and unevaluated resources. However, given the large size of the cumulative analysis impact area, the wide variety in resource types and significance, and likelihood of additional resources being identified due to the extensive Native American use within the cumulative impact analysis area, it is uncertain at this time whether these measures would avoid a substantial adverse change in the significance of a unique archaeological resource and if avoidance in all cases would be possible.

Additionally, SACOG cannot require implementing agencies to adopt these mitigation measures, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, cumulative impact related to cultural resources would be **significant and unavoidable**.

GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

Cumulative Impacts Related to Geology, Soils, and Paleontological Resources

Geological and Soils Resources

Impacts related to geology and soils are not cumulative in nature. For example, impacts related to seismic shaking, erosion and loss of topsoil, geologic stability, and expansive soils relate only to project structures or the individual project site. Impacts resulting from development on expansive soils at one project site are not worsened by impacts from development on expansive soils at another project site. Rather the soil conditions, and the implications of those conditions for each project, are independent. Therefore, because these impacts do not combine to create a cumulative impact, there is not an existing adverse cumulative condition related to geology and soils and, because

projects that occur under the 2025 Blueprint would follow existing prescriptive regulations to address concerns related to these resources, the 2025 Blueprint would not result in a substantial contribution to any cumulative effects.

Paleontological Resources

In contrast, paleontological resources can be thought of as areawide resources, and their loss at multiple sites may result in a cumulative impact. The geologic formations within the cumulative impact analysis area are varied depending on location and consequently rock units sensitive for paleontological resources may result in paleontological resources being exposed on the surface by fluvial actions or as outcrops, found at depth beneath younger sediments, or found beneath only a thin veneer of surficial soils or alluvial deposits. Additionally, the types of sedimentary deposits where paleontological resources occur are located throughout the cumulative impact analysis area. Nevertheless, no comprehensive paleontological studies have been conducted for the entire cumulative impact analysis area, and as a result, no information regarding the sensitivity of certain areas is available. Because there are existing adverse cumulative conditions related to damage or loss of paleontological resources, there is an existing cumulative impact related to paleontological resources. The 2025 Blueprint could result in a substantial contribution to this cumulative effect. The cumulative impact would be significant.

Mitigation Measures

Implement Mitigation Measure 3.6-1: Site-Specific Paleontological Resources Inventory Assessment and Construction Monitoring by a Paleontologist

Significance after Mitigation

Mitigation Measure 3.6-1 would require a paleontological report for paleontological sensitive rock units for future development and transportation projects. Implementation of the mitigation measure would not eliminate the potential for inadvertent discovery of paleontological resources nor ensure that the project's contribution to cumulative impacts regarding paleontological resources would not be cumulatively considerable. Projects taking advantage of CEQA streamlining provisions must apply the mitigation measure described above to address site-specific conditions, resulting in impacts that remain significant and unavoidable. However, SACOG cannot require implementing agencies to adopt mitigation measures, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, the regional contribution to this cumulative impact would be **significant and unavoidable.**

GREENHOUSE GAS EMISSIONS AND ENERGY

Cumulative Impacts due to Greenhouse Gas Emissions and Energy

Greenhouse Gas Emissions

Wildfire, flood risk, and drought are key challenges in the plan area. The SACOG region includes some of the areas of the state at the highest risk of wildfires, particularly in Placer and El Dorado counties (see Section 3.18, "Wildfire"). The plan area is also at risk of flooding both from infrastructure failure and localized flooding from river inundation (see Section 3.9, "Hydrology and Water Quality"). The availability of municipal water in dry years is evaluated in Section 3.18, "Utilities and Service Systems." The severity of these impacts is anticipated to increase as a result of climate change (i.e., the gradual long-term increase in average global temperature and its effects on the planet's climate systems).

Section 3.7, "Greenhouse Gas Emissions and Climate Change," in this Draft EIR summarizes the surface temperature increases that are anticipated to result from climate change. California experienced several of the most extreme natural events in its recorded history in the last 15 years: a severe drought from 2012 to 2016, an almost non-existent Sierra Nevada winter snowpack in 2014-2015, increasingly large and severe wildfires, and back-to-back years of the warmest average temperatures (OPR et al. 2018). According to California Natural Resources Agency's *Safeguarding California Plan: 2018 Update*, California experienced the driest 4-year statewide precipitation on record from 2012 through 2015; the warmest years on average in 2014, 2015, and 2016; and the smallest and second smallest Sierra snowpack on record in 2015 and 2014 (CNRA 2018). The year 2024 was the warmest year since global records began

in 1850 at 1.29 °C (or 2.32°F) above the 20th century average of 13.9°C (57.0°F). This value is 0.10°C (0.18°F) more than the previous record set in 2023. The 10 warmest years in the 174-year record have all occurred during the last decade (2014–2024) (NOAA 2025). In contrast, the northern Sierra Nevada experienced one of its wettest years on record during the 2016–2017 water year (CNRA 2018). The changes in precipitation exacerbate wildfires throughout California through a cycle of high vegetative growth coupled with dry, hot periods which lowers the moisture content of fuel loads. As a result, the frequency, size, and devastation of forest fires have increased.

The fire history of the plan area is described in Section 3.18, "Wildfire." Wildfires are a significant threat in California, particularly in recent years as the landscape responds to climate change and decades of fire suppression. It is estimated that since 1985, more than 50 percent of the increase in the area burned by wildfire in the western US is attributable to anthropogenic climate change (Abatzoglou and Williams 2016). As climate change persists, it will produce increasing temperatures and drier conditions that will generate abundant, dry fuels. All wildfires (those initiated by both natural and manmade sources) tend to be larger under drier atmospheric conditions and when fed by drier fuel sources (Balch et al. 2017). According to the California Natural Resources Agency's Fourth Climate Change Assessment, climate change will make forests more susceptible to extreme wildfires, and by 2100 it is estimated that if greenhouse gas emissions continue to rise, the frequency of extreme wildfires (over 25,000 acres burned) would increase by 77 percent (CNRA 2018).

Recent notable fires outside of the plan area include the Camp Fire, which destroyed the town of Paradise in Butte County and caused 85 fatalities in November 2018. Most recently in January of 2025, the Los Angeles area fires burned a total area of approximately 50,000 acres, killing more than two dozen people, destroying over 15,000 homes and businesses, and creating unhealthy air quality for millions of people (CalFire 2025, NOAA 2025). Moreover, changes in the intensity of precipitation events following wildfires can also result in devastating landslides. In January 2018, following the Thomas Fire, 0.5 inches of rain fell in 5 minutes in Santa Barbara causing destructive mudslides formed from the debris and loose soil left behind by the fire.

As temperatures increase, the amount of precipitation falling as rain rather than snow also increases, which leads to increased flooding because water that would normally be held in the snowpack of the Sierra Nevada and the Cascade Range until spring would flow into the Central Valley during winter rainstorm events. This scenario would place more pressure on the levee/flood control system in the plan area (CNRA 2018) and could exacerbate risk of flooding in areas with less formal flood protection facilities. Furthermore, in the extreme scenario involving the rapid loss of the Antarctic ice sheet and the glaciers atop Greenland, the sea level along California's coastline is expected to rise 54 inches by 2100 if GHG emissions continue at current rates (OPR et al. 2018).

Temperature increases and changes to historical precipitation patterns will likely affect ecological productivity and stability. Existing habitats may migrate from climatic changes where possible, and those habitats and species that cannot retreat will be severely threatened. Altered climate conditions will also facilitate the movement of invasive species to new habitats, where they could outcompete native species. Altered climatic conditions dramatically endanger the survival of arthropods (e.g., insects, spiders) which could have cascading effects throughout ecosystems (Lister and Garcia 2018). Conversely, a warming climate may support the populations of other insects such as ticks and mosquitos, which transmit diseases harmful to human health such as the Zika virus, West Nile virus, and Lyme disease (European Commission Joint Research Centre 2018).

Changes in temperature, precipitation patterns, extreme weather events, wildfires, and sea-level rise have the potential to threaten transportation and energy infrastructure, crop production, forests and rangelands, and public health (CNRA 2018; OPR et al. 2018). The effects of climate change will also have an indirect adverse impact on the economy as more severe natural disasters cause expensive physical damage to communities and the state. Additionally, adjusting to the physical changes associated with climate change can produce mental health impacts such as depression and anxiety (Padhy et al. 2015).

The issue of global climate change is inherently a cumulative issue because the GHG emissions of individual projects cannot be shown to have any material effect on global climate. Therefore, the 2025 Blueprint's impact on climate change is addressed only as a cumulative impact. As described in Section 3.7 of this Draft EIR, the 2025 Blueprint would not conflict with SB 375 emissions reduction targets or substantially interfere with local GHG reduction plans.

However, based on evidence put forth by the California Air Resources Control Board (CARB), compliance with the reduction goals set forth by SB 375 is not sufficient to achieve the State's near-term GHG reduction goals outlined in the 2022 Scoping Plan (i.e., 40 percent below 1990 emissions by 2030 [SB 32] and Statewide carbon neutrality by 2045 [Assembly Bill 1279]). As explained further in Section 3.7, this target is likely not achievable without the identification and implementation of State programs that are outside of SACOG's authority to implement. Nevertheless, because the 2025 Blueprint would result in GHG emissions that exceed these State GHG reduction targets, implementation of the 2025 Blueprint could contribute to global climate change in a manner that exacerbates the hazards described above.

Recognizing the many challenges to development in high-risk parts of the region, the land use forecast minimizes the extent to which land is consumed for development in these areas. For example, the Development Pattern emphasizes development outside of the in areas mapped as Very High Fires Hazard Severity Zone in maps published by CalFire. Development is anticipated on an estimated at 1,246 acres (see Table 3.19-2) over 30 years. As described in Section 3.19, regional growth, land use change, and transportation network improvements and programs associated with the 2025 Blueprint would expose people and structures to an increased risk of loss, injury, or death involving wildland fires. Risks would be exacerbated in areas where people and structures would be concentrated within and adjacent to VHFSZs. In the future, climate change could result in greater risk of wildfire, in terms of more severe fires, longer fire seasons, and expanded areas of fire potential.

With respect to changes in precipitation patterns that could result in flooding and drought, land uses and transportation facilities in the 2025 Blueprint that are located within the 100-year or 200-year flood hazard zones, as well as dam inundation zones, would be subject to the safety and design requirements, and the requirements of individual municipal and county flood control management agencies described in Section 3.9. Compliance with these regulatory requirements would address the risk of flooding. However, as noted above, climate change may result in heavier periods of rain that stress existing flood management infrastructure such that capacity may be exceeded and failure may result. Based on the data in the applicable urban water management plans (UWMPs) summarized in Section 3.18 of this Draft EIR, there is a potential for regional growth to result in a demand for potable water that exceeds supply. If climate change leads a greater likelihood that the region would experience multiple dry years, the plan area could have inadequate water supply during periods of drought, leading local suppliers to rely more heavily on groundwater supplies.

The 2025 Blueprint, which is required to accommodate forecast population growth with a Development Pattern that reflects local land use planning while promoting VMT efficiency, would not reduce regional GHG emission forecasts to a level that aligns with the State targets set in the 2022 Scoping Plan. As a result, implementation of the 2025 Blueprint could exacerbate climate change. In implementing the 2025 Blueprint, SACOG would prioritize investment in the 3,400 miles of roadway infrastructure located in flood or fire risk areas, and development that supports a more resilient region in the face of climate change. By ensuring communities are prepared and adaptable, SACOG strives to safeguard lives and property by ensuring communities can minimize and respond to natural disasters. The impacts identified in this Draft EIR related to wildfire, flooding, and water supply may be more severe due to climate change.

Energy

The cumulative impact analysis area for cumulative impacts related to energy use includes the surrounding MPO regions. Like the plan area, the cumulative impact analysis area will experience growth that results in the use of energy for construction and operation of futures uses. Also similar to the 2025 Blueprint, these developments will be subject to state and local regulations designed to reduce wasteful and inefficient energy use. There is no evidence to suggest that cumulative development will result in an adverse cumulative condition relative to the efficient use of energy with the application of these existing regulations.

Because the 2025 Blueprint would facilitate compact development of complete communities in existing cities, towns, and suburbs and create a more efficient transportation system by way of transportation infrastructure improvements, it would not result in the wasteful or inefficient use of energy. Thus, the 2025 Blueprint's impact related to the wasteful or inefficient use of energy would not be cumulatively considerable. Development under the 2025 Blueprint would be required to comply with all local plans such as climate action plans, GHG reduction plans, or sustainability

plans that contain requirements for energy efficiency. Further, all development under the 2025 Blueprint would be required to implement energy efficiency measures in accordance with Part 6 of the Title 24 California Building Code (California Energy Code) to reduce energy demand from buildings. Therefore, the 2025 Blueprint's contribution to cumulative energy would not be cumulatively considerable.

The impact analyses in Section 3.7, "Greenhouse Gas Emissions and Energy," conclude that the 2025 Blueprint would result in significant and unavoidable impacts related to inconsistency with the state's ability to achieve the 2030 reduction target of SB 32 and carbon neutrality by 2045 and increasing GHG emissions from project construction activities for growth in the 2025 Blueprint that could be inconsistent with achievement of the state's climate goals. Because the analysis of GHG impacts in Section 3.7 also serves as the 2025 Blueprint's cumulative analysis of GHG emissions that contribute to climate change, the 2025 Blueprint would have a **significant** contribution to substantial effects related to GHG emissions that would be cumulatively considerable.

Mitigation Measures

Implement Mitigation Measure 3.16-1: Implement VMT Reduction Strategies

Implement Mitigation Measure 3.7-1: Coordinate with and Support Local Agencies within the Plan Area to Reduce Regional GHGs from All Sectors

Mitigation Measure 3.7-2: Implement All Feasible On- and Off-Site Mitigation Measures to Reduce GHG Emissions Below a Lead Agency–Approved Threshold of Significance

Significance after Mitigation

Implementation of mitigation measures identified above would minimize the contribution of the 2025 Blueprint to cumulative GHG and climate change impacts but would not reduce them to less-than-significant levels. Consequently, the cumulative impact would be **significant and unavoidable**.

HAZARDS AND HAZARDOUS MATERIALS

Cumulative Impacts Related to Hazards and Hazardous Materials

Hazards and hazardous materials impacts may be related to the transport, use, or disposal of hazardous materials; reasonably foreseeable upset or accidental conditions involving the release of hazardous materials; emission of hazardous materials within a 0.25 of a school; location on a known hazardous materials site; sites with a documented history of hazardous materials use, release, or contamination could generate localized effects on people or the environment; and airport-related hazards. However, these effects occur independently of one another and are related to site-specific and project-specific characteristics and conditions. Because impacts related to hazards and hazardous materials are generally geographically limited there is not an adverse cumulative condition for these impacts.

Implementation of projects and development in the cumulative analysis impact area could result in a significant cumulative impact related to interfering with emergency response plans. However, emergency response and emergency evacuation plans are designed by the Office of Emergency Services for each county in the cumulative impact analysis area for the purpose of responding to potential emergency situations and these plans are updated regularly to address development and buildout in each county. In addition, impacts to emergency services and evacuation within the cumulative impact analysis area would also be required to comply with applicable CBC, regional, and municipal fire code requirements and encroachment permitting to ensure that individual development projects are in compliance with established laws and regulations pertaining to emergency services and evacuation. Implementation of the 2025 Blueprint would not substantially impair an adopted emergency response plan or emergency evacuation plan, with adherence to applicable CBC, county, and municipal fire code and emergency access requirements. Land use and transportation projects that require roadway diversions would be required to obtain encroachment permits and, if applicable, a construction traffic management plan, to address the safe circulation of traffic for the duration of construction activities.

Therefore, the 2025 Blueprint would not result in a considerable contribution to a cumulative impact related to hazards and hazardous materials. This impact would be **less than significant.**

Mitigation Measures

No mitigation is required for this impact.

HYDROLOGY AND WATER QUALITY

Cumulative Impacts on Hydrology and Water Quality

Surface or Groundwater Quality

A significant cumulative impact related to violating water quality standards or waste discharge requirements or substantially degrading surface or groundwater quality could occur if cumulative projects in combination with the 2025 Blueprint would increase the volume of stormwater runoff and/or contribute to pollutant loading in the storm drain system in exceedance of acceptable levels within the cumulative study area. Cumulative impacts to surface- and groundwater quality could occur as future projects are developed within the cumulative impact analysis area because construction and operational activities could increase the volume of stormwater runoff with increased impervious surfaces and/or contribute to pollutant loading in the storm drain system. However, projects within the cumulative impact analysis area would be required to comply with all applicable federal, state, and local water quality regulations, including but not limited to the Clean Water Act (CWA), National Pollution Discharge Elimination System (NPDES) permits, CALGreen, applicable Basin Plans, Municipal Separate Storm Sewer System (MS4) permits, and prepare project-specific water quality management plans, as required. Regulatory compliance would substantially reduce impacts on surface- or groundwater quality during construction and operation.

Buildout of the 2025 Blueprint would be subject to the statewide NPDES Construction General Permit requirements, which include implementation of project-specific stormwater pollution prevention plans and best management practices to reduce pollutants in stormwater runoff leaving a project site during construction and operation. If individual projects disturb less than 1 acre of land, they are still required to comply with the NPDES Phase II MS4 General Permit and CALGreen Chapters 4 and 5 for residential and nonresidential development, respectively, regarding the control of stormwater drainage and water quality. Water quality from land use and transportation development discharging into existing impaired water bodies, as listed in the CWA Section 303(d), would be regulated through the NPDES permitting process; through this process, construction and operation of the 2025 Blueprint would not result in a net increase of the pollutants for which impaired water bodies are listed. Therefore, the 2025 Blueprint would not result in stormwater discharges that violate water quality standards or waste discharge requirements established by the Central Valley RWQCB and Lahontan RWQCB or otherwise substantially degrade surface or groundwater quality. For these reasons, the 2025 Blueprint would not result in a considerable contribution to a cumulative impact related to surface and groundwater quality.

Groundwater

A significant cumulative impact related to substantially decreasing groundwater supplies and/or recharge could occur if development occurring under the adjoining MPOs, in combination with development under the 2025 Blueprint, would increase use of groundwater supplies above agreed upon levels or introduce large quantities of impervious surfaces, which substantially inhibit groundwater recharge into the underlying basin. As cumulative development occurs in the cumulative impact analysis area, water suppliers serving these areas could use groundwater to meet future demand. However, other cumulative projects in the cumulative impact analysis area would be required to analyze their regional development footprint in relation to the sizes of applicable groundwater basins and demonstrate compliance with governing groundwater management plans and groundwater sustainability plans. Buildout of the 2025 Blueprint would not be expected to substantially increase impervious surfaces relative to the size of groundwater basins and subbasins as they are large and the regional land use growth footprint where development would be expected to increase impervious surfaces is generally a small portion of these subbasins. Compared to existing conditions, however, buildout of the 2025 Blueprint would result in an increase in impervious

surfaces within the plan area, which would decrease the volume of water available for groundwater recharge. To address this, individual projects proposed (both land use and transportation) would be required to demonstrate their compliance with the governing groundwater management plans and groundwater sustainability plans, as part of individual project approval. Therefore, the 2025 Blueprint would not result in a considerable contribution to a cumulative impact related to groundwater supplies and recharge.

Drainage

A significant cumulative impact related to drainage substantial erosion or siltation, on- or off-site flooding, an exceedance of the capacity of stormwater drainage systems, additional sources of polluted runoff, or impeding or redirecting flood flows could occur if development associated with the 2025 Blueprint, in combination with development in the cumulative impact analysis area, would increase the volume of stormwater runoff such that adverse drainage issues were to occur.

Construction and operation of projects within the cumulative impact analysis area would be required to comply with all applicable federal, state, and local regulations, including but not limited to the statewide NPDES Construction General Permit, County MS4 Permits, CALGreen, Caltrans regulations, and local municipal and county flood control and stormwater management regulations. As part of a project entitlement process, each cumulative project would be required to obtain all relevant permits and approvals specific to the project site or transportation improvement area and be designed to address drainage, stormwater discharge, and flood hazards on a project-by-project basis. Each project would undergo discretionary review and evaluation under CEQA to address potential impacts on hydrology and water quality and identify necessary mitigation measures, where appropriate. Adherence to this regulatory compliance would be enforced as part of the design review and building permit process and would ensure that impacts on hydrology and water quality would be avoided or minimized. Therefore, regulatory compliance would ensure cumulative effects related to adverse hydrological effects caused by changes in drainage patterns are considered less than significant.

Development of the 2025 Blueprint would result in an increase in impervious surfaces compared to existing baseline conditions. However, individual projects developed under the 2025 Blueprint would be required to incorporate storm drain systems to collect on- and offsite runoff and may include low impact development strategies such as infiltration, biofiltration, and any other applicable BMPs that would capture, treat, retain, and discharge flows. These BMPs would remove pollutants from stormwater runoff and reduce stormwater discharge volumes. In addition, the 2025 Blueprint would be subject to the requirements of the statewide, regional, and local standards related to site drainage, which would minimize effects related to drainage. For these reasons, the 2025 Blueprint would not result in a considerable contribution to a cumulative impact related to adverse hydrological effects caused by changes in drainage patterns.

Release of Pollutants in Flood or Seiche Zones

A significant cumulate impact would occur if implementation of the 2025 Blueprint, in conjunction with the increased growth and development in the cumulative impact analysis area, resulted in substantially increasing the existing risk of releasing pollutants due to inundation in flood hazard or seiche zones. Cumulative impacts to existing flood and seiche zones and the potential to release pollutants could occur as future projects are developed within the cumulative impact analysis area because construction and operational activities could continue to locate development in existing flood and/or seiche zones. However, the regional land use growth pattern and transportation network improvement projects associated with both the buildout of the 2025 Blueprint, as well as development in the cumulative impact analysis area that is located within flood plains would be subject to the safety and design requirements of the Central Valley Flood Protection Plan; Fish and Game Code Section 1602; CBC; and the requirements of individual municipal and county flood control agencies. Compliance with these regulatory requirements would ensure that development and programs associated with the 2025 Blueprint, as well as development in the cumulative impact analysis area, would not have a significant cumulative impact related to release of pollutants due to project inundation in flood hazard zones. Therefore, the 2025 Blueprint would not result in a considerable contribution to a cumulative impact pertaining to flood hazards and risking the release of pollutants due to inundation.

Water Quality Control Plans and Sustainable Groundwater Management Plans

A significant cumulative impact would occur if implementation of the 2025 Blueprint, in conjunction with development in the cumulative impact analysis area, resulted in the obstruction of a water quality control plan or sustainable groundwater management plan. Buildout of the 2025 Blueprint and development within the cumulative impact analysis area would be required to comply with CWA Section 303(d), CALGreen, NPDES permitting, and Caltrans regulations, all of which have adopted standards that regulate water quality. Projects that comply with these regulatory requirements are considered to be consistent with the governing water quality control plans. This is because Basin Plans are primarily implemented by using the NPDES permitting process to regulate water discharges so that water quality objectives are met. Although the NPDES permitting system primarily regulates surface water, surface water discharges that meet NPDES standards safely recharge groundwater aquifers. Buildout of the 2025 Blueprint and development within the cumulative impact analysis area would also be subject to applicable groundwater management plans, as part of each individual project approval process. For these reasons, the 2025 Blueprint would not result in a considerable contribution to a cumulative impact related to conflicting with or obstructing implementation of a water quality control plan or sustainable groundwater management plan.

The 2025 Blueprint would not result in a considerable contribution to a cumulative impact related to hydrology or water quality. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

LAND USE AND PLANNING

Cumulative Impacts Related to Land Use

Land use impacts are typically isolated to a jurisdiction, except where land uses may interact or conflict with land uses in adjacent jurisdictions. Growth and development within the cumulative impact analysis area could result in a cumulative land use impact if the development is inconsistent with the Land Use and Resource Management Plan (LURMP) adopted by the Delta Protection Commission (DPC). Because development at the urban edge could adversely impact agriculture, natural resources, recreational land, and water quality in the Delta, this could result in a cumulative land use impact. However, jurisdictions with land in the Primary Zone are required by PRC Section 29763 to adopt general plans with land uses consistent with the goals and policies in the LURMP, subject to review by the DPC. Therefore, projects within the cumulative impact analysis area that fall within the LURMP boundaries would be required to demonstrate consistency with the LURMP and satisfy mitigation requirements. Consistency with SB 375 would occur through routine conformance with the requirements of state and federal law and the CEQA requirements for MTP/SCS updates, which provide mechanisms for public disclosure and consistency.

The additional population, housing, and job growth forecasted for the planning period is not a result of the 2025 Blueprint; rather, the growth is forecast to occur with or without the proposed plan. The 2025 Blueprint provides a strategy to accommodate growth in such a way as to achieve consistency with regional planning and the SCS requirements. The 2025 Blueprint has been analyzed for consistency with SB 375 and found to be fully compliant. Impacts related to physically dividing a community are not experienced at the regional level and would not be exacerbated by conditions across the region. Consistency with the legal requirements is analyzed for the plan area and would not extend beyond the plan area into the cumulative impact analysis area. Therefore, the 2025 Blueprint would not result in a considerable contribution to a cumulative land use impact. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

MINERAL RESOURCES

Cumulative Impacts to Mineral Resources

Mineral resources impacts resulting from development over sub-surface mineral resources at one project site are generally not worsened by impacts from development over mineral resources at another project site; however, development within the cumulative impact analysis area could result in a cumulative impact on mineral resources if the development reduces the ability to access important designated mineral resources. Therefore, the cumulative loss of mineral resources in the cumulative analysis impact area could be significant.

Development associated with the 2025 Blueprint and other plans within the cumulative impact analysis area would occur primarily in developed areas, and extraction of rare and/or unique deposits is unlikely. In addition, implementation of the proposed transportation improvements and land use changes associated with the 2025 Blueprint and other regional plans would be required to comply with the Surface Mining and Reclamation Act as well as local general plans, specific plans, and other land use plans that include policies to protect existing and future mineral resources. As such, the 2025 Blueprint would not make a considerable contribution to a significant cumulative impact. The cumulative impact would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

NOISE AND VIBRATION

Cumulative Noise Impacts

While an increase in construction- and operational-related noise would occur over time within the cumulative impact analysis area related to projects and development, noise impacts are generally experienced locally as noise levels dissipate rapidly with increased distance from the source and thus are not cumulative in nature. These effects occur independently of one another, related to site-specific and project-specific characteristics and conditions.

Construction-Related Noise

Construction-related noise is typically considered a localized impact, affecting only receptors closest to construction activities. Therefore, unless the construction of cumulative projects occurs near each other (i.e., less than 500 feet) and at the same time, noise from individual construction projects have little chance of combining to create cumulative impacts. Cumulative projects in the cumulative impact analysis area would, therefore, not combine to result in an adverse cumulative condition related to construction noise.

Noise associated with construction of land use development and transportation network improvement projects under the 2025 Blueprint would be intermittent, temporary, and would fluctuate depending on the phase of construction. Buildout associated with the 2025 Blueprint would result in a temporary increase in noise within the plan area, which could exceed applicable noise thresholds or result in a substantial increase in noise. However, because of the localized nature of the impacts, the project would not result in a considerable contribution to a cumulative impact related to construction noise.

Operational Noise

As shown in Table 3.12-7, several roadways within the cumulative impact analysis area experience traffic noise levels that exceed applicable absolute noise thresholds. Future development could result in additional traffic volumes along these roadways and contribute to existing noise along area roadways. Therefore, there would be an adverse cumulative noise condition within the cumulative impact analysis area. Implementation of the 2025 Blueprint would result in population and employment growth over the planned buildout period. The growth would result in increased noise associated with new land use development and transportation network improvements. Increased traffic from implementation of the 2025 Blueprint could contribute to a significant increase in traffic noise levels on roadway segments throughout the cumulative impact analysis area, beyond acceptable thresholds in various communities outside of the region. The project would result in a considerable contribution to a cumulative impact related to traffic noise.

A significant cumulative impact related to operational stationary noise could occur if stationary noise sources associated with implementation of the 2025 Blueprint and development within the cumulative impact analysis area combine to increase ambient noise levels above applicable thresholds or result in a substantial permanent increase in noise. However, stationary noise is generally limited to the vicinity of individual project sites and would not combine to produce noise levels that exceed noise standards at nearby receptors and would not combine to produce a substantial increase with other stationary equipment in the surrounding region to result in a cumulative effect. In addition, other cumulative projects in the cumulative impact analysis area would also be required to analyze stationary noise impacts and demonstrate compliance with applicable noise standards which ensure stationary noise levels remain within acceptable limits. For these reasons, the 2025 Blueprint would not result in a considerable contribution to a cumulative impact related to stationary noise.

Construction-Related Vibration

Construction-related vibration is typically considered a localized impact, affecting only receptors closest (i.e., within 5 feet) to construction activities. Cumulative projects in the cumulative impact analysis area would, therefore, not combine to result in an adverse cumulative condition related to construction vibration. At increasing distances from the source, vibration levels dissipate rapidly and have less potential to cause disturbance to people or damage to structures. In addition, vibration-intensive equipment (e.g., vibratory rollers) is only used during discrete phases of construction and for intermittent and brief periods of time. For these reasons, vibration impacts would remain local to the respective project site and would not combine with vibration sources from other construction activities, even if construction activities were to simultaneously occur. Other cumulative projects in the cumulative impact analysis area would also be subject to and required to comply with applicable vibration standards and would implement mitigation measures if vibration levels exceeded applicable standards. For these reasons, the 2025 Blueprint would not result in a considerable contribution to a cumulative impact related to construction vibration.

Operational Vibration

As detailed above, vibration is typically considered a localized impact. At increasing distances from the source, vibration levels dissipate rapidly and have less potential to cause disturbance to people or damage to structures. For these reasons, vibration impacts would remain local to the respective project site and would not combine with vibration sources from other operational activities, even if such activities were to occur simultaneously. Cumulative projects in the cumulative impact analysis area would be subject to and required to comply with applicable vibration standards and would implement mitigation measures as needed. Projects proposed under the 2025 Blueprint would also implement vibration reduction measures and demonstrate compliance with applicable vibration standards. For these reasons, the project would not result in a considerable contribution to a cumulative impact related to operational vibration.

The combination of noise impacts from planned development in the SACOG region along with planned development in neighboring regions that comprise the cumulative impact analysis is not anticipated. For this reason, with the exception of operational transportation noise, there would not be an adverse cumulative condition to which noise generated by the 2025 Blueprint would contribute. Because the combination of planned development within the SACOG region and planned development in the cumulative impact analysis area may result in cumulative traffic noise impacts that cannot be fully mitigated this cumulative impact would be **significant**.

Mitigation Measures

Implement Mitigation Measure 3.12-2: Employ Measures to Reduce Traffic Noise

Mitigation Measure 3.12-4: Reduce Exposure of New Sensitive Receptors to Transportation and Stationary Noise

Significance after Mitigation

Implementation of Mitigation Measure 3.12-2 would result in substantial reductions in traffic-related noise through design techniques, specific materials (i.e., rubberized asphalt), and construction of noise barriers depending on site-specific conditions. However, the combination of planned development within the SACOG region and planned

development in neighboring regions that comprise the cumulative impact analysis area may result in cumulative traffic noise impacts that cannot be fully mitigated. In addition, SACOG is unable to enforce mitigation in surrounding jurisdictions. For these reasons, the contribution of the 2025 Blueprint to the cumulative impact would be **significant and unavoidable**.

POPULATION, EMPLOYMENT, AND HOUSING

Cumulative Impacts to Population and Housing

Regional land use planning and the existing transportation system greatly influence the regional development pattern that dictates how communities will accommodate population and housing growth. Implementation of MPO plans in the cumulative impact analysis area would produce adequate levels of housing to support forecasted growth and prevent regional displacement. Therefore, there would be no existing adverse cumulative condition related to population and housing.

Through 2050, approximately 580,000 people, 260,000 jobs, and 278,000 housing units are forecasted to be added in the plan area. This will represent an approximate 23 percent increase in the population and 29 percent increase in the housing expected to be added overall in the plan area by 2050. The regional growth forecast was informed by the Development Pattern used in the 2025 Blueprint, as well as transportation network improvements associated with the 2025 Blueprint. The 2025 Blueprint would distribute growth by focusing new development and infrastructure in areas with capacity to accommodate this new growth to achieve a more balanced jobs/housing ratio and to optimize transportation investments that support those land uses. Thus, implementation of the 2025 Blueprint would not result in displacement at the regional scale, and localized displacement would not be expected to exert development pressure on areas surrounding the plan area. The 2025 Blueprint would not result in a considerable contribution to a significant cumulative impact. The impact would be **less than significant.**

Mitigation Measures

No mitigation is required for this impact.

PUBLIC SERVICES

Cumulative Impacts on Public Services

This assessment includes an analysis of law enforcement, fire protection, emergency response, schools, libraries, and social services. These public services are generally provided by local governments for areas within their jurisdictions and are typically not provided on a regional or extra-regional basis. However, development within the cumulative impact analysis area could result in a cumulative impact on some public services as discussed below.

Law enforcement and fire protection are provided by local governments or fire protection districts for areas within their jurisdiction, although mutual aid agreements between agencies do help spread resources. California Highway Patrol (CHP) has specific jurisdiction over all California state routes (including all freeways and expressways), US Highways, Interstate Highways, and all public roads in unincorporated parts of a county. The US Forest Service and the California Department of Forestry and Fire Protection provide fire protection services within many rural areas. Social services are generally provided by counties and not provided on a regional basis. Public schools are provided by school districts to areas within their jurisdictions. While districts may have cross-jurisdictional boundaries, school services are provided at the local, rather than regional, level. Libraries are also generally provided by local governments for areas within their jurisdiction, and services are not provided on a regional basis, although there are often regional cooperation programs. Public services are generally local programs. The provision of service occurs locally, and the physical environmental effects of constructing new facilities to serve the growth forecasts of the local jurisdictions within the cumulative impact analysis area in alignment with established service standards are generally within the forecast of development in the respective plans. Because public services are highly localized, they are generally not influenced by surrounding development, and because the physical effects of constructing new facilities

have been captured in the growth forecasts of the MPOs, there would not be a cumulative effect unique to the provision of public services under the regional planning framework.

During project planning, design, and project-level environmental review under the 2025 Blueprint, implementing agencies would ensure that adequate service levels for public services are achieved. The implementing agency would ensure that public services would be available to comply with applicable service levels. This would be documented prior to project approval in the form of a capacity analysis, provider will-serve letter, or equivalent documentation. Although implementation of the 2025 Blueprint would improve regional transportation, there is a possibility police, fire, and other emergency response times due to the increased land development would be longer in 2050 as compared to baseline conditions. As such, the contribution of the 2025 Blueprint to those impacts is **potentially significant**.

Mitigation Measures

Implement Mitigation Measure 3.14-1: Require Provision of Adequate Public Services

Significance after Mitigation

As discussed previously, during project planning, design, and project-level environmental review, implementing agencies shall ensure that adequate service levels for public services are achieved. The implementing agency would generally ensure that public services will be available to comply with applicable service levels. However, SACOG does not have the authority to require the implementing agencies to comply with service levels, and no feasible mitigation measure exists to reduce the cumulative impact on service levels of public services caused by the implementation of 2025 Blueprint. Therefore, the 2025 Blueprint would make a considerable contribution to this cumulative impact. This impact would be **significant and unavoidable**.

RECREATION

Cumulative Impact to Parks and Recreation

With the exception of some state and national parks, most recreation facilities are designed to serve the population of a region, community, or neighborhood according to local service standards. Planned population growth, and local regulation of associated development within the jurisdictional boundaries of incorporated cities and unincorporated areas prevent the occurrence of an existing cumulative recreation impact by implementing adopted General Plans that include a policy framework which guides development, designates appropriate areas for development, and guides the preservation of public open space. Therefore, there is not an existing significant adverse impact related to recreation in the cumulative context.

The development of the 2025 Blueprint would improve the efficiency of regional transportation systems to limit the increase in demand for parks and recreational facilities. However, since the Development Pattern in the 2025 Blueprint would concentrate development in the region, it is possible that level of service standards of existing parks and recreational facilities would be exceeded. Local agencies will strive to meet their parks standards, but infill development may not allow local jurisdictions to achieve their ideal resident-to-acre ratio as outlined in their parks and recreation plans. The increased use of existing parks and recreational facilities may contribute to the degradation of these resources over time. In addition, parks and recreation areas would be developed within the areas identified for growth, as residential developments indicated in the 2025 Blueprint would need to identify land for parks as part of their entitlements. Impacts associated with construction of new recreation facilities are within the scope of and covered in this Draft EIR. Therefore, although the 2025 Blueprint would have a potentially significant related to the degradation of quality of recreational facilities, this would be a localized impact and would not result in an adverse cumulative impact. Cumulative impacts related to recreation resources would be **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

TRANSPORTATION

Cumulative Impacts on Transportation

The cumulative impact analysis area for cumulative impacts related to transportation includes the surrounding MPO regions. Like the plan area, the cumulative impact analysis area will continue to experience growth, which has resulted in a significant cumulative impact related to transportation. Transportation planning in the cumulative analysis impact area is governed by the regional planning documents of the respective MPOs. Regional planning documents include measures to reduce per capita VMT and create more efficient transportation systems by way of transportation infrastructure improvements and encouraging efficient development. However, CARB has explicitly recognized that MPOs could not achieve reductions without additional state policies and funding. At the time of writing this Draft EIR, it is unknown how CARB, through statewide programs or coordination with local governments, would meet the higher percent VMT reduction target by 2030 and 2045 identified in the 2022 Scoping Plan and other supporting documents. Therefore, the gap in VMT reductions needed to achieve the state's reduction targets remains. Therefore, there is an existing significant cumulative condition regarding transportation in the cumulative impact analysis area.

With the exception of VMT which is discussed separately below, transportation impacts associated with implementation of the 2025 Blueprint would be less than significant, which reflects the success of the 2025 Blueprint in: increasing person trips by bicycle, walking, and transit; improving infrastructure and connectivity for pedestrians, bicycles, and transit; and minimizing impacts to the movement of goods and agricultural products. The 2025 Blueprint is designed to maintain and foster the balance between jobs and housing within the region. The additional population, housing, and job growth forecasted for the planning period is not a result of the 2025 Blueprint; rather, the 2025 Blueprint provides a strategy to allocate growth in such a way as to achieve a more balanced jobs/housing ratio and to optimize transportation investments that support those land uses. By doing this, the 2025 Blueprint results in lower VMT per capita and a greater mode share for non-motorized modes.

Although per capita VMT within the region is forecast to continue to decline by 2050, total household-generated VMT with implementation of the 2025 Blueprint is forecast to increase largely due to the increase of approximately 580,000 people. The VMT per capita decline indicates that the projected land use pattern and planned transportation improvements assumed in the 2025 Blueprint would effectively work together to improve system efficiency and minimize increases in VMT. While implementation of the 2025 Blueprint would achieve VMT reductions per capita, they are not enough to help the state successfully achieve desired statewide goals. The contribution of the 2025 Blueprint to this cumulative impact is cumulatively considerable and would be potentially significant.

Mitigation Measures

Implement Mitigation Measure 3.16-1: Implement VMT Reduction Strategies

Significance after Mitigation

Implementation of Mitigation Measure 3.16-1 would minimize the contribution of the 2025 Blueprint to cumulative VMT but would not reduce this impact to a less-than-significant level. Until the state identifies a program for further VMT reductions, and MPOs have funding and authorization to achieve the reductions, the 2025 Blueprint would make a considerable contribution to a significant cumulative VMT impact. This impact would be **significant and unavoidable**.

TRIBAL CULTURAL RESOURCES

Cumulative Impacts on Tribal Cultural Resources

The cumulative analysis area includes tribal cultural resources in the cumulative impact analysis area. Lands within the cumulative impact analysis area have been affected by development since the early 1800s as part of Spanish settlement and missionization and through the steady influx of nonnative people during the 1850s Gold Rush. Disturbance of these lands continued after the Gold Rush through expansion of agricultural endeavors through the mid-1900s. The residential and recreational growth after World War II within the cumulative impact analysis area continued to perpetrate

significant adverse effects on tribal cultural resources, including Native American remains. Cumulative development in the area continues to contribute to the disturbance and loss of tribal cultural resources.

Because all tribal cultural resources are unique and nonrenewable members of finite classes, meaning there are a limited number, all adverse effects erode a dwindling resource base. Tribal cultural systems are represented by the total inventory of all sites and other remains in the region. As a result, a meaningful approach to preserving and managing cultural resources must focus on the likely distribution of tribal cultural resources within a region, rather than on a single project or parcel boundary.

Proper planning and appropriate mitigation can help to capture and preserve knowledge of such resources and can provide opportunities for increasing our understanding of the past environmental conditions and cultures by recording data about sites discovered and preserving them in place. State and local laws are also in place that protect these resources in most instances. Even so, it is not always feasible to protect these resources, particularly when preservation in place would make projects infeasible. For this reason, there is an adverse cumulative condition in the cumulative analysis area.

Transportation network improvement and programs under the 2025 Blueprint could potentially affect tribal cultural resources due to direct impacts related to construction and operation that could result in substantial alteration or removal of a tribal cultural resource, and indirect impacts from access-related damage from construction projects and ongoing operations. Therefore, the contribution of the 2025 Blueprint to this cumulative impact is cumulatively considerable and would be potentially significant.

Mitigation Measures

Implement Mitigation Measure 3.17-1: Prepare and Implement a Worker Awareness Training Program for Tribal Cultural Resources

Implement Mitigation Measure 3.17-2: Halt Ground Disturbance Upon Discovery of Subsurface Tribal Cultural Resources and Evaluate Discovered Resources

Implement Mitigation Measure 3.17-3: Reduce Visibility or Accessibility of Tribal Cultural Resources

Significance after Mitigation

Mitigation Measures 3.17-1, 3.17-2, and 3.5-3 would reduce impacts on known and unknown archaeological resources because they would protect in place, recover information, record, or otherwise treat the discovered resource appropriately, and require construction monitoring of known unique archaeological resources and unevaluated resources. However, given the large geographic extent of the plan area, the wide variety in resource types and significance, and likelihood of additional resources being identified due to the extensive Native American use of the plan area, it is uncertain at this time whether these measures would avoid a substantial adverse change in the significance of a tribal cultural resource and if avoidance in all cases would be possible. Therefore, the 2025 Blueprint would result in a considerable contribution to a cumulative impact related to tribal cultural resources. This impact would be **significant and unavoidable**.

UTILITIES AND SERVICE SYSTEMS

Cumulative Impacts to Utilities and Service Systems

Water Supply and Infrastructure

Growth in the cumulative impact analysis area would result in an adverse cumulative condition in regard to water supply. Water supply and associated infrastructure have both local and regional aspects. An increase in demand and water consumption in one region has the potential to affect supplies throughout California, because the surface water supply systems are interconnected. In addition, while some groundwater basins are localized and confined to a

particular area, some groundwater basins extend to multiple regions. Development of future water supply and associated infrastructure regionally and beyond depends on several factors, such as surface water availability, groundwater recharge, land use density and land use type. Future urban growth (increases in population, housing, and employees) will result in an increase in water supply needs and demand. Future growth in the cumulative impact analysis area could lead to potential future water shortages and depletion of existing water supplies. The potential effects of global climate change add further uncertainty. Therefore, cumulative water supply and infrastructure impacts are considered to be significant

The 2025 Blueprint is designed to be consistent with local planning documents, including the growth and water demand projections used in local UWMPs. However, the projected Development Pattern under the 2025 Blueprint would generate water demand in exceedance of the projected water supply contained in several UWMPs in the plan area. Therefore, increases in water demand associated with the projected land use pattern of the 2025 Blueprint could exceed projected supplies during normal, single dry year, and multiple dry year scenarios for portions of the plan area, which would result in a considerable contribution to the significant cumulative impact.

Stormwater and Infrastructure

Stormwater drainage systems are generally provided by local governments for areas within their jurisdictions or for combined county/city areas and are not typically provided on a regional or extra-regional basis. Stormwater drainage solutions typically depend on site-specific and project-specific characteristics and implementation. As such, impacts to stormwater drainage systems within the cumulative impact analysis area would not combine to create a significant cumulative impact.

Wastewater and Infrastructure

Wastewater service (sewer treatment) is generally a local or regional concern, as wastewater treatment facilities and services are usually provided and regulated by local governments or special districts for areas within their jurisdiction. However, growth in the cumulative impact analysis area could result in exceedance of one or more wastewater treatment facility causing an adverse cumulative condition in regard to wastewater.

Under the 2025 Blueprint Development Pattern, population and job growth would be concentrated in areas of existing development and would generate the most additional wastewater demand in these areas. It is likely that some treatment facilities would need to expand their capacity before 2050 to meet expected population growth, or to respond to RWQCB requirements to provide capacity to receive their NDPES permit. Therefore, the 2025 Blueprint could result in a considerable contribution to a significant cumulative impact.

Solid Waste

Solid waste management is generally provided at the county level by the respective counties and not on a regional basis. However, some jurisdictions have contracted with areas outside of the region to accept and/or export their solid waste. Continued growth in the cumulative impact analysis area would result in an adverse cumulative condition in regard to solid waste.

Implementation of the 2025 Blueprint has the potential to exceed available local and regional solid waste capacity. However, compliance with state and local regulations pertaining to the generation and disposal of solid waste would ensure that impacts associated implementation of the 2025 Blueprint would be less than significant as they would require the continued reduction of solid waste in the plan area while enforcing the implementation of waste reduction programs identified by the local jurisdictions. Therefore, the 2025 Blueprint would not make a considerable contribution to a cumulative impact related to solid waste.

Energy Services and Telecommunications

Natural gas, propane, electricity, and telecommunications services are provided by various public and private utility providers serving the cumulative impact analysis area. Market competition ensures the provision of these services and, with the exception of propane service, regulatory oversight is provided by the State Public Utilities Commission. Infrastructure issues are generally site-specific and/or project-specific in nature and would not combine to create a significant cumulative impact. Future urban growth (increases in population, housing, and employees) will result in an

increase in water supply needs and demand. The cumulative water supply and infrastructure impacts are not considered to be significant, and the 2025 Blueprint would not result in a considerable contribution to the significant cumulative impact.

Mitigation Measures

Implement Mitigation Measure 3.18-1: Implement Water Conservation Measures

Implement Mitigation Measure 3.18-2: Require Provision of Adequate Utility Service

Significance after Mitigation

If the implementing agencies adopt Mitigation Measure 3.18-1, it would reduce the contribution of the 2025 Blueprint on cumulative impacts on water supply and wastewater to less than significant. However, SACOG cannot require implementing agencies to adopt these mitigation measures, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, the regional contribution to this cumulative impact would be **significant and unavoidable**.

WILDFIRE

Cumulative Impacts to Wildfire Hazards

The cumulative impact analysis area contains lands that are designated by the California Department of Forestry and Fire Protection as moderate and very high fire hazard severity zones (VHFHSZs). Growth into and adjacent to VHFHSZs has continued to exacerbate risks related to wildfire. Development within the cumulative impact analysis area would be required to comply with applicable state, county, and municipal ordinances to adequately address wildfire regulation standards. Cumulative projects with potential to result in exposure to pollutants and post-fire hazardous conditions within the cumulative impact analysis area would also be required to comply with applicable building code and fire code requirements addressing building materials, fuel management, and grading to ensure that individual project sites maintain a proper slope for structural foundations and safe roadway design through construction and operation. Future utility infrastructure would also be subject to the requirements established in the PRC, including Section 4292, which requires clearing of flammable fuels for a minimum 10-foot radius from the outer circumference of poles and towers; and Section 4293, which sets basic requirements for clearances around electrical conductors. Furthermore, future projects would be required to meet vegetation clearance requirements outlined in Title 14, Section 1104.1(d) of the California Code of Regulations (CCR) for single overhead facilities. Regulatory compliance with the CBC and applicable fire code requirements would ensure that construction of projects within the cumulative impact analysis area maximize safety against wildfire and reduce existing wildfire risks related to infrastructure improvements. In addition, construction of transportation projects would be subject to the requirements of local and/or regional ordinances addressing grading and excavation, which would typically require the controlled removal and clearing of vegetation and result in a reduction of forested and vegetated areas prone to wildfires as new roads and lanes are formed, compared to existing conditions. However, despite compliance with applicable regulations, there is an existing significant cumulative condition related to exposing people or structures to uncontrolled spread of fire or exacerbating wildfire risk as both the frequency and severity of wildfires in the cumulative impact analysis area is increasing.

The Development Pattern for the 2025 Blueprint would locate some growth adjacent to and within VHFHSZs in the plan area, thereby exacerbating existing wildfire risk. Development of the 2025 Blueprint would be subject to the CBC, PRC, county, and municipal fire code and emergency access requirements to ensure compliance with established minimum wildfire preparedness and protection standards. Applicable CBC, county, and municipal fire code and emergency access requirements would require, for example, that proposed structures within areas of wildfire risk are built to the most up to date engineering and design standards; use defensible space through controlled landscaping/setbacks to minimize accumulated vegetation and flammable material; provision of sufficient ingress and egress of emergency service vehicles; and the locations and adequate flow of fire hydrants. As discussed above,

future utility infrastructure under the 2025 Blueprint would be subject to the requirements established in the PRC and CCR for single overhead facilities.

Nevertheless, the 2025 Blueprint would contribute to an adverse cumulative impact related to wildfire hazards from locating more residents in proximity to, and within, areas of high wildfire risk, potentially exposing people and structures to pollutant concentrations resulting from wildfire smoke. Because the regional growth pattern includes growth within wildfire hazard areas and such anthropogenic influence is known to increase wildfire risk, the risks associated with wildfire would not be avoided. There are no additional plan-level measures available that would address this potential. For the vast majority of development projects, compliance with existing local, state, and federal regulations would minimize potential adverse effects associated with the potential to exacerbate wildfire hazards; however, due to the level of uncertainty regarding the specific project types and the lack of detailed development plans at this programmatic level of analysis, it cannot be concluded with certainty that all impacts would be minimized below the threshold of significance. Individual projects may involve use types, locations, or design features that cannot be anticipated at this planning stage. Therefore, the project would result in a considerable contribution to a significant cumulative impact related to the exacerbation of wildfire risk.

Mitigation Measures

Implement Mitigation Measure 3.18-1: Complete a Fire Safe Plan for Land Use Projects Located in Local Responsibility Area and State Responsibility Area Very High Fire Hazard Severity Zones

Significance after Mitigation

Impacts regarding wildfire risk due to slope, winds, post-fire flooding, landslides, and slope instability as a result of the 2025 Blueprint would have a less than significant impact with the implementation of Mitigation Measure 3.18-1, which requires the implementation of a fire safe plan in areas identified as VHFHSZs. With the implementation of Mitigation Measure 3.18-1, the plan would not result in a considerable contribution to a cumulative impact related to wildfire hazards. This impact would be **less than significant**.

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